CAPE News

Newsletter of The Indian Society for Pediatric and Adolescent Endocrinology (ISPAE)

DECEMBER 2025
Volume 29 - Issue 4

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PEDIATRIC DIABETES

Next Issue: Pediatric Gynae Endocrinology

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EDITOR'S MESSAGE

Dear Readers,

Greetings & Happy New Year from the CAPE News Editorial team.

We are delighted to bring to you yet another exciting issue of CAPE News on Pediatric Diabetes to all beloved members of ISPAE. It has been a delightful marathon task to assemble all the activities done by the members regards to pediatric diabetes.

We have very innovative cases and a crisp guideline update on pediatric diabetes. The minireviews, drug corner and biochemistry corner are very fresh to go through. The highlights of the issue are universal cord blood screening guidelines and awareness and podcast with stalwart.

Government of Gujarat has started a program in juvenile diabetes where they are providing all children with type 1 diabetes with insulin in the form of basal bolus therapy, glucometer and strips for SMBG, ketone monitoring strips, lancets and needles. The health ministry of Gujarat, Pediatric Departments of all medical colleges and Pediatric Endocrinologists (Dr Chirantap Oza, Ahmedabad & Dr Zalak Shah Upadhyay, Rajkot) along with WHO Gujarat and Indian Institute of Public Health, Gandhinagar (IIPHG) together made it possible. The program will run across 33 districts of State for all children below 18 years of age. This is a vital achievement where the State has started a program for children with Type 1 Diabetes. ISPAE is very proud that Pediatric Endocrinologist community is doing actual work for children with Type 1 Diabetes at the grassroot level. We congratulate the entire team. This will serve as a reference for other states, so they can also develop a similar program for children with Type 1 Diabetes.

The theme of the next issue is "Pediatric Gynae Endocrinology". We look forward to your contributions.

We will be glad to have suggestions/ feedback for improvements, at editor.capenews@gmail.com.

Regards,
Nikhil Lohiya
Team CAPE News

ISPAE PRESIDENT- MESSAGE

Dr Anurag Bajpai- on behalf of ISPAE 2025-2026

Dear friends,

Dear ISPAE members, colleagues, and friends,

At the offset I would like to congratulate the editorial board for an outstanding issue centered on Diabetes. This breadth reflects the reality of diabetes care in our clinics and communities, and the editorial team deserves appreciation for assembling such a timely, practice-shaping edition.

I am delighted to note the success of the ISPAE meeting in Nagpur, which delivered vibrant scientific interactions, thoughtful debates, and strong trainee participation. The case-based discussions and methodology-focused sessions helping translate evidence into everyday decisions. My thanks to the organizers, faculty, and volunteers whose meticulous efforts ensured that the academic program was rigorous, collegial, and relevant to practice.

At the society level, the ISPAE CARE initiative continues to move forward. CARE is our effort to distill evidence into concise, context-appropriate clinical algorithms for pediatric endocrinology. These algorithms are designed for point-of-care use so that busy clinics, teaching units, and remote practices can confidently adopt standardized, high-quality pathways.

Our guideline and statement pipeline is robust. The DSD guideline emphasizes multidisciplinary, family-centered care across evaluation, communication, and longitudinal support. The Congenital hypothyroidism guideline focuses on age-specific thresholds, diagnosis and treatment. Type 1 Diabetes ambulatory guidelines would provide crisp guidance across diagnosis, insulin therapy, technology-enabled monitoring, school and transition to adult services.

As we look ahead, CAPE News will remain a key channel for sharing progress, inviting participation, and amplifying good work from across the country. I encourage members to contribute clinical pearls, brief reviews, and data snapshots that can sharpen day-to-day practice.

Once again, my warm congratulations to the CAPE News editorial board for a high-value Diabetes issue. Together, we will keep raising the standard of care for children and adolescents with endocrine disorders through evidence, collaboration, and compassion.

Warm regards,
Dr Anurag Bajpai.

WELCOME NEW MEMBERS

Life Members		Associate Life Members
• Priyanka Srivastava- Bhopal • Anju Thammanna- Bengaluru • Gargee Gogoi- Assam • Ayushi Agrawal- Jawad • DM Naik- Mapusa	• Keerthana KJ- Thrissur • Chaitra KS- Kolar • Ritesh BR- Bengaluru • Shraddha Mangshetty- Gulbarga • Amulya AD- Ernakulam	• Rathan Shekhar Bysani- Bengaluru • Rahul Parashar- Faridabad

WINNERS- September 2025 Quiz

Dr Vikas Katewa, Dr SN Medical College Jodhpur
Dr Ayush Agarwal, IPGMER, Kolkata
Congratulations!

ISPAD GUIDELINES: WHAT IS NEW!


Nimisha Sachan, *Fellow, CDER, Kanpur;* ***Aashima Dabas,*** *Professor, Dept of Pediatrics, Maulana Azad Medical College & Lok Nayak Hospital, New Delhi*

The following are a few summary points from the updated chapters recently published.

Chapter 2- Screening, Staging, and Strategies to Preserve β-Cell Function

Type 1 diabetes (T1D) is classified into 4 stages on the basis of antibody status and clinical features. As majority of T1D cases occur in children without family history, the current guidelines recommend population-based or community screening using autoantibodies.

Stages	Autoantibodies	Glycemia	Symptoms	Risk of progression
At risk	Single antibody present	Normal	Asymptomatic	Only 15% progress to stage 3 in 15y
Stage 1	Multiple AABs confirmed on ≥ 2 samples	Normoglycemia FBS< 100mg/dl 2hr OGTT < 140	Asymptomatic	• 44% progress to Stage 3 in 5y • 80–90% progress in 15y
Stage 2	Multiple AABs confirmed on ≥ 2 samples	Dysglycemia: • Elevated FBG • Impaired OGTT (140-199 mg/dl) • HbA1c 5.7-6.5% or ≥ 10% rise in HbA1c	Asymptomatic	75% progress to stage 3 within 5y
Stage 3	AAB +nt	• Fasting ≥126 mg/dL • OGTT ≥200 mg/dL • Random glucose ≥200 mg/dL + symptoms • HbA1c ≥6.5%	Asymptomatic (3a) or Symptomatic (3b)	Overt T1D
Stage 4	AAB present	Long standing hyperglycemia under treatment	May have complications	Chronic phase; variable progression

AAB: Islet autoantibodies; FBG: Fasting blood glucose; OGTT: 2hr oral glucose tolerance test; RBG: Random blood glucose

Follow-up plan: Structured follow-up (education, counselling, HbA1c, random glycemia and Continuous Glucose Monitoring) of patients with stage 1 and stage 2 diabetes who are antibodies positive. The frequency of follow-up will depend on the age of the child. Teplizumab, monoclonal antibody against CD3, preserves β-cell function, and may be offered to individuals in Stage 2 to slow the progression of the disease.

Chapter 3: Screening for Type 2 diabetes in children and adolescents

Screening for T2D to be offered (i) in youth who have a BMI ≥85th percentile for age and sex, (ii) after onset of puberty or after 10 years of age, AND (iii) in the presence of one or more risk factors:

- Family history of T2D
- Gestational diabetes mellitus or pregestational diabetes in mother
- High risk ethnic group
- Clinical signs of insulin resistance
- Child born SGA or LGA
- Intake of atypical antipsychotic agents (Aripiprazole, Risperidone)

- Screening tests can be HbA1c, FBG, RBG, or 2hr OGTT.
- If screening test is normal: repeat screening every 2-3y.
- Annual screening is needed if: increasing BMI, worsening cardiometabolic profile, PCOS, presence of metabolic dysfunction associated liver disease, strong family history of T2D, or evidence of prediabetes.

Medical therapies

• Metformin is the first line of therapy. • GLP-1 agonists, e.g. liraglutide, semaglutide, dulaglutide • SGLT2 Inhibitors	**Insulin** • HbA1c > 8.5% • Ketosis present • Unclear diagnosis between T1D and T2D • Initially start with basal insulin dose of 0.2-0.5mg/kg/day followed by prandial insulin if glycemic control inadequate

Chapter 8: Glycemic targets

- Optimal target of Hba1c < 6.5% - in children those who have access to advanced diabetes technology: Continuous glucose monitoring (CGM) + Automated insulin delivery device (AID)
- A higher HbA1c target of < 7% - at initiation of therapy or those in which risk of hypoglycemia present, without advanced technology
- Self-monitoring blood glucose: FBG 70-110 mg/dL and PP 70-140 mg/dL
- CGM targets –

Time above range (TAR) grade 2: BG > 250 mg/dL	< 5%
Time above range (TAR) grade 1: BG > 180 mg/dL	< 25%
Time in range (TIR): BG 70-180 mg/dL	70%
Time in tight range (TITR): 70-144 mg/dL	50%
Time below range (TBR) grade 1: < 70 mg/dL	< 4%
Time below range (TBR) grade 2: < 54 mg/dL	< 1%

Chapter 9: Insulin and adjunctive treatments

Intensive insulin treatment regimen with multidose injections, or insulin pump with rapid acting or Regular insulin to be considered as **gold standard** for all ages.

Role of newer insulins as shown below:

Insulin	Onset of action	Peak effect	Duration	Mechanism Of Action
Fast acting insulin aspart (U100)	5-20 min	1.5-2.2 hr	5-7 hr	Contains niacinamide and L-arginine to speed up the monomer formation Approved for age ≥1y
Fast acting insulin lispro (U100)	15-17 min	2-3 hr	5-7 hr	Contains citrate and Treprostinil to accelerate subcutaneous absorption Approved for age ≥ 2y
Technosphere insulin		53min	2.5 hr	Insulin powder adsorbed onto carrier technosphere, carry the insulin to alveoli for absorption
Insulin degludec (U100 and U200)	30-90 min	No peak	42 hr	Removal of terminal B chain and acylation with 16 carbon fatty diacid results in multihexamer chains Approved for age ≥ 1y
Insulin Glargine (U300)	2-6 hr	No peak	30-36 hr	Absorption of insulin glargine precipitate decreased Approved for age ≥ 6y

Chapter 16

1. **Major emphasis on Automated insulin devices (AID)** (hybrid closed loop)-

- Most preferred method of insulin delivery
- Most advanced insulin delivery technology
- Recommended for youth with diabetes, irrespective of age.

2. **Guidance on non-AID pump therapy**

a. Connected insulin pens also known as smart insulin pen, for individuals who prefer not have a device on the body. It is a non disposable pen device or a pen cap placed on a disposable pen. It can be used without CGM. It is linked to an app on a smartphone and guides insulin dosage.
b. Standard pump therapy (CSII without automation)- may be less preferred than AID.
c. Other modifications:
   i. PLGS (Predictive low glucose suspend) system - recommended for all people with T1D who do not have access to AID.
   ii. LGS (Low glucose suspend) - Recommended when AID and PLGS system not available.
   iii. Senser augmented pump.

3. **Safety recommendations for Insulin Pump/ AID users:** To keep backup long-acting insulin (glargine or degludec) at home, to use during failure of pump. Need for educating families to recognize pump occlusions & alarms.

Chapter 17: CGM (Continuous Glucose monitoring):

CGM is emphasized as playing a pivotal role in diabetes management. It is recommended in all children, adolescents and young adults with T1D and should be initiated as soon as possible. The types are:

i. Real time (rtCGM) - measures and displays sensor glucose levels continuously. Sensor data can be transferred real time for remote access to relatives and caregivers. It is preferred to other forms of CGM
ii. Intermittently scanned (isCGM) or flash CGM - needs to be scanned with reader/ smartphone to get glucose readings.
Masked or blinded CGM (glucose readings blinded and collected retrospectively) are no longer used.
   - CGM are available with or without alarms to notify glucose levels out of target range.
   - Modern CGM systems have median absolute relative difference (MARD) values as low as 8%, and are quite reliable and safe during exercise and night time, and for hypoglycemia detection.

MINI REVIEW

POST-TRANSPLANTATION DM SURVEILLANCE: SAFEGUARDING SUCCESS IN TRANSPLANT MEDICINE

Amulya AD, Ruchi Parikh. *Narayana Health SRCC Children's Hospital, Mumbai*

Introduction

Post-transplant Diabetes Mellitus (PTDM) represents a serious metabolic complication in children receiving Solid Organ (SOT) or Hematopoietic Stem-Cell Transplantation (HSCT). The terminology shifted from New Onset Diabetes after Transplantation (NODAT) to PTDM following the 2014 International Consensus, due to concerns that many children may already have undiagnosed pre-transplant dysglycemia and that diabetes developing years later may still be attributable to transplant-related factors[1]. Unlike transient stress hyperglycemia, PTDM persists beyond the immediate post-transplant period and significantly impairs graft and patient outcomes. The incidence in pediatric recipients varies widely, depending on age, type of graft, immunosuppressive regimen, genetics, and ethnic distribution. Recognition is often delayed as symptoms may be subtle or masked by concurrent illness.

Epidemiology and Disease Burden

Although PTDM prevalence in adults is well established, pediatric incidence remains less clearly defined. PTDM occurs in 3–20% of pediatric SOT recipients, depending on various risk factors, with the majority (64%) developing it within the first 6 months during the phase of higher immunosuppressive exposure[1]. The highest risk has been observed in lung transplant recipients, because many have cystic fibrosis, an additional diabetogenic condition. More than 80% of pediatric SOT recipients survive into young adulthood, and may encounter transplant-related complications such as premature atherosclerosis and microvascular complications. These cardiometabolic diseases, emerging early in transplant survivors, can compromise quality of life and healthcare burden into adulthood[2].

Hyperglycemia in the immediate post-transplantation period is seen in approximately 15% of pediatric SOT patients without known diabetes and, of them, 40% subsequently develop PTDM. Potential risk factors after HSCT include age, hypothalamic and pituitary function, pre-transplant insulin resistance, graft-vs-host disease, and immunosuppressive therapy.

Pathophysiology

PTDM results from β-cell injury combined with enhanced insulin resistance. Calcineurin inhibitors impair β-cell survival, insulin secretion, and transcriptional regulation of insulin-related genes. Glucocorticoids reduce insulin sensitivity, exacerbate hepatic glucose output, decrease number of insulin receptors and their affinity for insulin, and affect adipose distribution. Additional contributors include hypomagnesemia, inflammatory stress, viral reactivation, pubertal insulin resistance, and genetic predisposition[2]. The interplay of these factors varies over time, making early glucose fluctuations a predictor of eventual metabolic failure.

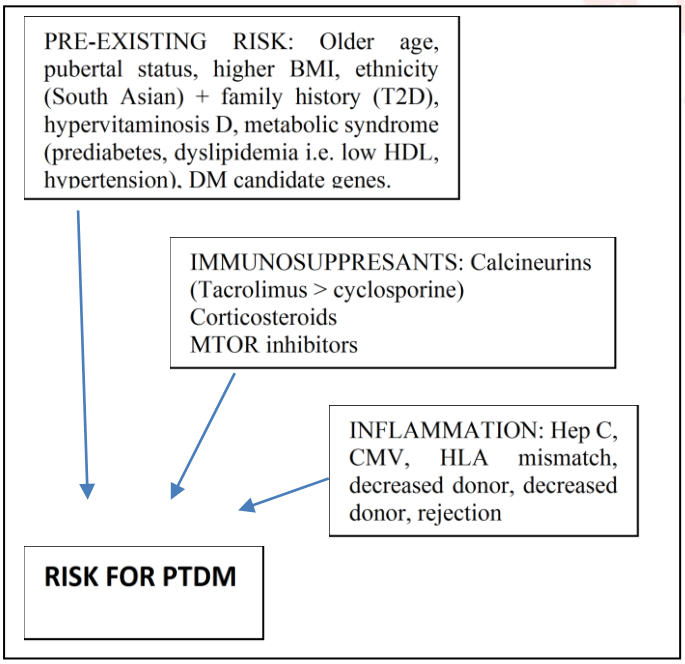
Clinical Presentation

Children may show only mild, intermittent hyperglycemia during routine monitoring. Osmotic symptoms such as polyuria and weight loss are uncommon, however severe manifestations such as diabetic ketoacidosis occur when early warning signs remain undetected[5] .

Risk Factors

Risk is amplified by a combination of non-modifiable and modifiable determinants[3].

Diagnosis



Diagnostic criteria mirror those for diabetes in children but should be interpreted in the correct clinical window. It follows ADA criteria for type 2 diabetes: fasting glucose ≥ 126 mg/dl on two occasions, random glucose ≥ 200 mg/dl with symptoms, 2-hour oral glucose tolerance test (OGTT) glucose ≥ 200mg/dl, or HbA1c > 6.5%[4]. Within the first three months after transplant, HbA1c is less reliable due to altered erythrocyte turnover. Persistent hyperglycemia beyond three months, detected by fasting glucose or OGTT, confirms PTDM. Random glucose >200 mg/dL with osmotic symptoms remains a valid acute diagnostic threshold[4].

Screening and Surveillance

Pediatric consensus recommends metabolic testing before transplantation to flag high-risk children[1]. Early post-transplant monitoring should prioritize capillary glucose profiles during periods of intense

immunosuppression, sepsis, or parenteral nutrition. Once graft function stabilizes and immunosuppression is reduced, HbA1c regains utility as part of ongoing annual surveillance[5]. A blood glucose target of 140–180 mg/dL is generally recommended in the early post-transplant period, maintaining time in range ≥70% within 70–180 mg/dL as it aligns with reduced microvascular risk[1].

Before transplant (baseline metabolic risk)

- Fasting plasma glucose (FPG)
- HbA1c (interpret cautiously in chronic kidney disease/ anemia)
- Consider OGTT in high-risk children (obesity, puberty, family history of diabetes, South Asian ethnicity)
- Document risk category

Early post-transplant (0-3 months)

- Daily bedside glucose monitoring while on high-dose steroids, parenteral nutrition, acute illness, or rejection therapy.
- Weekly fasting and post-meal glucose monitoring if high-risk.
- Avoid relying on HbA1c during this period.

Late post-transplant (>3 months)

- FPG + HbA1c every 3-6 months in high-risk groups.
- Annual metabolic screening in all pediatric transplant survivors.
- Consider OGTT or continuous glucose monitoring if unexplained hyperglycemia or discordant results.

Management

Initial management focuses on optimizing immunosuppressive strategies, particularly tacrolimus dose and steroids, as it may aid restoring β-cell function to reduce metabolic toxicity while preserving graft health[2]. However, there is no evidence yet to modify immunosuppression solely to treat PTDM due to graft-rejection risk[1]. Insulin remains the mainstay of therapy in children due to its efficacy and safety profile in the context of fluctuating graft function and dynamic immunosuppressive dosing, especially during the immediate post-transplant period. Early aggressive insulin may preserve β-cell function and reduce long-term PTDM incidence[1]. Nutritional modification and addressing comorbid dyslipidemia help reduce insulin resistance over time. Metformin is the first-line therapy for pediatric T2D patients, as it improves insulin sensitivity and decreases hepatic gluconeogenesis. Dose adjustments are recommended during periods of change in renal function, and discontinuation during periods of any acute illness to reduce the risk of lactic acidosis. Glucagon-like peptide 1 agonists (GLP-1a) increase glucose-mediated insulin secretion, inhibit glucagon secretion, decrease hepatic gluconeogenesis, and delay gastric emptying[1]. They exhibit β-cell protective effects against tacrolimus and steroids in vitro, and clinical HbA1c reduction in adults with SOT, but have not yet been studied in the pediatric age group.

Multidisciplinary follow-up with pediatric endocrinology enables timely adjustment of therapy and helps prevent progression to severe dysglycemia and ketoacidosis, which has been described when monitoring is delayed. Long-term cardiometabolic surveillance, including blood pressure and lipid management, is essential. Lifestyle interventions, micronutrient correction, and structured diabetes education must accompany pharmacologic measures to reduce long-term cardiovascular risk[2].

Long-Term Outcomes

PTDM is associated with increased graft dysfunction, infection susceptibility, and cardiovascular morbidity. Pediatric patients with PTDM have 3-fold higher mortality than age-matched controls. The Pediatric Endocrinology–Transplant collaboration is therefore central to preserving graft longevity and quality of life[2].

Conclusion

PTDM is no longer an uncommon occurrence in pediatric transplantation. Its subtle onset, diverse risk profile and long-term consequences demand a proactive strategy incorporating **pre-transplant risk assessment**, **early structured glycemic surveillance**, and **sustained metabolic monitoring** throughout survivorship. Although

ADA-based diagnostic and management criteria are routinely used in PTDM, strong pediatric evidence supporting these recommendations is still limited. With increasing long-term survival among pediatric transplant recipients, well-designed studies are needed to guide optimal management and clarify long-term outcomes. Meanwhile, clinicians should recognize the limitations of current diagnostic tools and tailor therapy by considering immunosuppressive effects and transplant-related comorbidities.

References:

1. Grundman JB, Wolfsdorf JI, Marks BE. Post-Transplantation Diabetes Mellitus in Pediatric Patients. Horm Res Paediatr. 2020;93(9-10):510-518. doi: 10.1159/000514988. Epub 2021 Mar 31. PMID: 33789298.
2. Popović L, Dragnić N, Đuranović S, et al. New onset diabetes after organ transplantation: risk factors, prevalence, and pathogenesis. Diagnostics. 2025;15(3):284.
3. Salah DM, El-Husseiny A, Elsebaie EH, et al. Monitoring of blood glucose after pediatric kidney transplantation: a prospective study. Pediatr Nephrol. 2023.
4. American Diabetes Association. Classification and diagnosis of diabetes. Diabetes Care. 2024.
5. Garro R, Warshaw B, Felner E. New-onset diabetes after kidney transplant in children. Pediatr Nephrol. 2015 Mar;30(3):405-16. doi: 10.1007/s00467-014-2830-7. Epub 2014 Jun 4. PMID: 24894384.

PRACTICAL ISSUES IN DISPOSING WASTE GENERATED IN MANAGING TYPE 1 DIABETES

Anju Virmani, *Director, Pediatric Endocrinology, Max Smart Super Speciality Hospital & Rainbow Children's Hospital, Delhi*

Managing T1D means generating biohazardous sharps, whether syringes, pen needles, lancets, or inserters for CGM or CSII, and other waste products, including a large amount of good quality plastic. Families should be proactively advised to deal with this waste. Some practical, pragmatic, suggestions:

1. Lancets and pen needles should be carefully capped and stored in a bottle made of thick, puncture-proof bottle, e.g. an empty, washed shampoo bottle. The vials and cartridges are made of glass and can cause injuries if broken. All the sharps and glass items should be handed over to your hospital/ clinic or laboratory for proper disposal.
2. NGOs can be encouraged to insist that free supplies given by them (insulin vials/ cartridges, syringes, pen needles) are brought back after use. This has several advantages – safe disposal of sharps/ glass can be ensured, while also increasing the chances of proper utilization and reducing the possibility of misuse. The NGO can tie up with any agency handling sharps disposal.
3. Sometimes hospitals refuse to accept sharps on the grounds of cost. If an NGO or other organization is willing to arrange disposal for a small fee, it can be a win-win situation: families who are well off can avail the facility and become familiar with the NGO, thus facilitating donations and mutual peer support.
4. The needles in insulin syringes are deeply embedded in the neck of the syringes. It is easy to get a bottle with a tiny opening (some empty cosmetic bottle: they are usually made of sturdy plastic), and to snap off the needle with a gentle twist into the opening. Thousands of needles can be safely accumulated in this way.

5. The rest of the syringe can be safely given to the raddiwala for plastic recycling. Similarly, the outer covers of pen needles, pen bodies, and the inserters of CGM sensors or CSII patches - can be collected to give the raddiwala for recycling - it's good quality plastic.
6. The sensors are electronic devices. If the adhesive patch is peeled off, the thin plastic filament cut off and the sensor washed, the sensors can be given for recycling with other electronic devices. Less often, glucometers, CGM transmitters, or pump electronics may need to be discarded and can be similarly given for recycling.
7. The law regarding disposal of glucostrips is stringent on the ground that they contain blood, but impractical. Strips collected in any large container which can be closed tightly (e.g. shampoo bottle, food containers) and disposed in general garbage are certainly safer than menstrual pads which are usually just wrapped and discarded. Pump tubing can be collected and disposed off in the same way.

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BONE FRAGILITY IN TYPE 1 DIABETES: A LIFELONG, UNDER-RECOGNIZED COMPLICATION

Arpita Bhriguvanshi, *Professor Junior Grade, King George Medical University, Lucknow*

Type 1 diabetes mellitus (T1D) confers a substantial and lifelong increase in skeletal fragility, beginning in childhood and amplifying with disease duration. Meta-analyses and population data show a 2–3-fold higher risk of any fracture and a 5–7-fold higher hip fracture risk across the lifespan compared with non-diabetic peers.[1] Importantly, elevated fracture risk begins in childhood, persists into adulthood, and is not explained by aBMD alone, defining a distinct phenotype of diabetic bone disease.

Skeletal Phenotype Across Childhood, Adolescence, and Adulthood

A meta-analysis of > 2,600 children and adolescents reports BMD Z-scores lower by ~0.2–0.5 SD at the lumbar spine, total body, and femur.[2] Deficits correlate with younger age at onset, longer diabetes duration, poor glycemic control, and lower IGF-1. Size-adjusted limitations of DXA mean true trabecular deficits may be underestimated. High-resolution imaging (pQCT/ HR-pQCT) demonstrates reduced trabecular vBMD, reduced cortical thickness, increased cortical porosity, and 10–20% lower FEA-derived bone strength, even when DXA is normal.[2,3] By young adulthood, peak bone mass is often suboptimal. In adults, aBMD is often normal or only mildly reduced (~−0.3 to −0.6 SD), yet fracture risk remains high. This mismatch highlights abnormalities in bone microarchitecture, cortical quality, and material properties rather than mineral density alone.

Bone Quality and Microarchitecture

Trabecular bone score (TBS) is consistently reduced in T1DM by ~0.05–0.10 units, independently of BMD, and correlates with fragility.[4] HR-pQCT data from DCCT/EDIC show 8–12% lower trabecular thickness, higher trabecular separation, 15–25% greater cortical porosity, and significantly reduced estimated bone strength in long-standing T1D.[3] These structural deficits worsen with higher lifetime HbA1c, microvascular complications, and greater AGE burden, explaining why fractures occur even with preserved BMD.

Mechanisms of Skeletal Fragility in T1D

1. **Insulin & IGF-1 deficiency → low bone turnover:** T1D reduces osteoblastic activity and bone formation markers. Glycemic improvement modestly raises IGF-1 but does not normalize BMD in the short term.
2. **AGE accumulation → impaired bone material properties:** Chronic hyperglycemia produces collagen cross-linking, making bone stiffer and more brittle. AGE burden correlates with lower BMD, reduced TBS, and poorer HR-pQCT architecture.
3. **Microvascular disease → impaired remodeling and perfusion:** Retinopathy, nephropathy, and neuropathy track with worse trabecular metrics and higher cortical porosity, supporting a vascular–skeletal link.
4. **Muscle–bone impairment → reduced mechanical loading:** T1D—particularly in youth—is associated with lower lean mass and reduced muscle quality; lean mass strongly predicts BMD/BMC and FEA strength.

Clinical Assessment Strategy

Children & Adolescents: Perform DXA (LS & TBLH Z-scores) or pQCT/ HR-pQCT when:

- Recurrent low-trauma fractures,
- Delayed puberty or very low BMI,
- Poor growth or persistently high HbA1c,
- Celiac disease, thyroid disease, or chronic glucocorticoids.

Interpret Z-scores in the context of size, maturation, and BMI.

Adults: Assess with DXA ± TBS when:

- T1D duration ≥ 10–15y,
- Age > 40–50y,
- Any fragility fracture,
- Microvascular complications, low BMI, hypogonadism, or steroid use.

Repeat DXA every 2–3y, based on risk.

Management Principles

- Optimize glycemia, ensure adequate vitamin D and calcium, and emphasize resistance + impact exercises.
- Treat osteoporosis based on fracture risk, recognizing that structural deficits may exist despite "normal" BMD.
- Antiresorptives (bisphosphonates, denosumab) are effective; anabolic-first therapy (teriparatide, abaloparatide, romosozumab) may be preferable in severe diabetic bone disease, though T1D-specific data remain limited.

Key Message

T1D produces a multifactorial skeletal disorder involving BMD, microarchitecture, cortical integrity, and bone material quality, driven by insulin/IGF-1 deficiency, glycemic exposure, microvascular disease, and muscle–bone impairment. Recognizing bone fragility as a chronic diabetic complication is essential for timely diagnosis, risk-stratified surveillance, and proactive fracture prevention.

References

1. Shah VN, Shah CS, Snell-Bergeon JK. Type 1 diabetes and risk of fracture: a meta-analysis. Diabet Med. 2015;32(9):1134–1142.
2. Zheng Y, Haji Abadi MR, Ghafouri Z, et al. Bone deficits in children and adolescents with type 1 diabetes: a systematic review and meta-analysis. Bone. 2022;163:116509.
3. Gregory NS, Rubin MR; DCCT/EDIC Research Group. Bone microarchitecture in adults with long-standing type 1 diabetes: findings from the DCCT/EDIC cohort. Diabetes Care. 2024;47(1).
4. Pan H, He W, Luo Y, et al. Trabecular bone score in type 1 diabetes mellitus: a meta-analysis of observational studies. J Orthop Surg Res. 2023;18:427.
5. Janner M, Craig ME, Braatvedt G, et al. Bone health in children and adolescents with type 1 diabetes: ISPAD Clinical Practice Consensus Guidelines 2022. Pediatr Diabetes. 2022;23(Suppl 1):1055–1072.

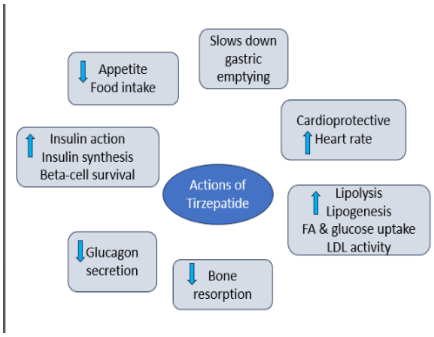
DRUG CORNER

TIRZEPATIDE: THE RISE OF THE TWINCRETIN REVOLUTION IN OBESITY AND TYPE 2 DIABETES CARE

Dhanya Soodhana, *Pediatric & Adolescent Endocrinologist, Aster MIMS, Kozhikode, Kerala.*

Obesity and type 2 diabetes mellitus (T2D) represent interconnected global epidemics that significantly impact public health. Weight gain is a major driver of insulin resistance, and contributes to the development of hypertension, dyslipidemia, and metabolic liver steatosis. Evidence consistently demonstrates that weight reduction improves glycemic control, enhances insulin sensitivity, and ameliorates associated comorbidities. The American Diabetes Association (ADA) therefore recommends at least 5% weight loss for individuals with T2D and overweight/ obesity, achieved through dietary modification, physical activity, and behavioral interventions. More substantial weight loss can reverse metabolic dysfunction, and in some cases, induce remission of T2D, as documented across multiple studies involving lifestyle modification, medications, bariatric surgery, or combined approaches.

Two incretin hormones: glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide-1 (GLP-1) are released by the gut in response to nutrient intake and play central roles in postprandial glucose regulation. Although the incretin effect is diminished in T2D, it can be partially restored by glucose-lowering therapies. GLP-1 receptor agonists (GLP-1RAs) improve glycemic control and promote weight loss through mechanisms such as enhanced glucose-dependent insulin secretion, suppression of glucagon, delayed gastric emptying, and increased satiety.



Following the introduction of GLP-1RAs in 2005, the development of novel agents has accelerated. Tirzepatide—the newest FDA-approved therapy in this class—has gained rapid popularity due to its superior efficacy compared with earlier GLP-1RAs. It functions as a dual agonist at both the GLP-1 and GIP receptors, earning the designation "twincretin." Although approved primarily as an adjunct therapy for adults with T2D, its significant weight-reducing effects led to widespread off-label use for obesity, contributing to periods of limited availability for patients with diabetes.

Clinical trials show robust metabolic benefits: substantial weight loss, marked improvements in HbA1c (reductions of ~20–28 mmol/mol depending on dose), and favorable effects on lipid parameters—decreasing total cholesterol, LDL-C, and triglycerides while increasing HDL-C. Gastrointestinal adverse effects, primarily nausea, vomiting, and diarrhea, are the most frequently reported and are dose-dependent. Gradual dose escalation improves tolerability, though discontinuation rates of 4–10% have been observed.

In the pediatric age group, tirzepatide is a promising new treatment for T2D and obesity, based on recent results from the Phase 3 SURPASS-PEDS clinical trial. The SURPASS-PEDS trial, a randomized, double-blind, placebo-controlled study involved 99 participants aged 10 to <18 years with T2D inadequately controlled by other medications (metformin and/or basal insulin), mean age 14·7y [SD 1·8]; mean baseline HbA1c 8·04% [1·23]), who were randomly assigned to tirzepatide 5 mg (n=32), tirzepatide 10 mg (n=33), or placebo (n=34). At week 30, tirzepatide was superior to placebo in reducing HbA1c, with a mean reduction of 2.23% in the pooled tirzepatide group versus an increase of 0.05% in the placebo group (estimated treatment difference -2·28%; 95% CI -2·87 to -1·69; p<0·0001). Glycemic efficacy was sustained up to 52 weeks with tirzepatide treatment. Data has been submitted to regulatory authorities for approval, but it is **not yet officially approved** for this age group.

Overall, tirzepatide offers a potent and multifaceted therapeutic option for both T2D management and weight reduction. Nevertheless, long-term randomized controlled trials are needed to clarify its safety profile and durability of effect across diverse patient populations.

Pharmacologic Profile of Tirzepatide:

Parameter	**Details**
Molecular Structure	39–amino-acid peptide with C20 fatty-acid acylation enabling albumin binding and prolonged half-life
Receptor Targets / Class	Dual GLP-1 and GIP receptor agonist ('twincretin')
Bioavailability	~81%
Time to Peak Concentration (Tmax)	~48 hours
Half-Life	~117 hours (~5 days)
Duration of Action	Sustained activity for 1 week (supports once-weekly dosing)
Approved Dosing (T2DM)	Start 2.5 mg weekly; increase every 4 weeks to 5, 7.5, 10, 12.5, or 15 mg
Dosing for Weight Management	Higher target doses (10–15 mg weekly) used for maximal weight loss
Mechanisms of Action	↑ Insulin secretion; ↓ glucagon; delayed gastric emptying; ↑ satiety
Effects on Glycemic Control	HbA1c reduction ~20.4 mmol/mol (5 mg) to ~28.2 mmol/mol (15 mg)
Effects on Body Weight	Robust, dose-dependent weight loss
Effects on Lipid Profile	↓ Total cholesterol, LDL-C, triglycerides; ↑ HDL-C
Common Adverse Effects	Nausea, vomiting, diarrhea, constipation, decreased appetite, injection-site reactions, abdominal discomfort, fatigue
Contraindications	• Personal or family history of MTC • MEN 2 • Serious hypersensitivity to tirzepatide • Pregnancy or breastfeeding (not recommended) • Severe GI disease such as gastroparesis

References:

1. Sokary S, Bawadi H. The promise of tirzepatide: A narrative review of metabolic benefits. *Prim Care Diabetes*. 2025;19(3):229-237.
2. Hannon TS, Chao LC, Barrientos-Pérez M, et al. Efficacy and safety of tirzepatide in children and adolescents with type 2 diabetes (SURPASS-PEDS): a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet*. 2025;406(10511):1484-1496.

THE AUTOANTIBODY REVOLUTION: DECODING TYPE 1 DIABETES RISK AND DIAGNOSIS

Ajinkya Patil, *Pediatric Endocrinologist, Hormocare Clinic, Jalgaon*

Islet Autoantibodies (AAB) have significantly advanced the clinical management of Type 1 Diabetes (T1D), enabling the transition from diagnosis at symptomatic onset to prediction and potential early intervention. These antibodies serve as critical diagnostic and prognostic biomarkers, offering conclusive evidence of autoimmune-mediated pancreatic β-cell destruction. These antibodies result from autoimmune destruction by CD8+ T cells and macrophages, causing β-cells to release previously sequestered intracellular antigens that activate humoral and cellular immune responses.

Clinical utility of antibody testing in type 1 diabetes

AAB testing serves an important clinical role in distinguishing T1D from other forms, such as Type 2 Diabetes (T2D) or monogenic diabetes, especially when clinical presentation is ambiguous. Additionally, it helps in identifying presymptomatic disease stages, stratifying progression risk, and selecting appropriate candidates for disease-modifying therapies and clinical trials. The utility of this approach is maximized when AAB results are evaluated as part of a panel, within the relevant population and clinical context, rather than relying on a single, isolated test.

Diagnosis and Classification

The four main autoantibodies tested, forming the cornerstone of modern screening, are Glutamic Acid Decarboxylase Autoantibodies (GADA), Insulin Autoantibodies (IAA), Insulinoma-Associated-2 Autoantibodies (IA-2A), and Zinc Transporter 8 Autoantibodies (ZnT8A). In Caucasian populations, a full panel detects at least one marker in over 95% of new-onset T1D cases.

Specific markers offer unique insights:

- **Islet Cell Antibodies (ICA):** The earliest discovered, these are directed against a mix of islet cell antigens detected by immunofluorescence. While sensitive, ICA testing is labor-intensive and has largely been supplanted by more specific assays.
- **GADA/GAD 65** (found in 70–80% Caucasians at onset of T1D) is the most common and persistent autoantibody, making it critical for diagnosing Latent Autoimmune Diabetes in Adults (LADA), a slow-progressing form of autoimmune diabetes often initially misdiagnosed as T2D.
- **IAA** (50–60% prevalence in young children) appears very early in the disease process but is typically sought only in insulin-naïve individuals, as testing is compromised approximately 14 days after starting exogenous insulin therapy.
- **IA-2A and ZnT8A** (60–70% and 60–65% prevalence, respectively) are key markers for active β-cell destruction, and adding ZnT8A increases overall diagnostic sensitivity[1].

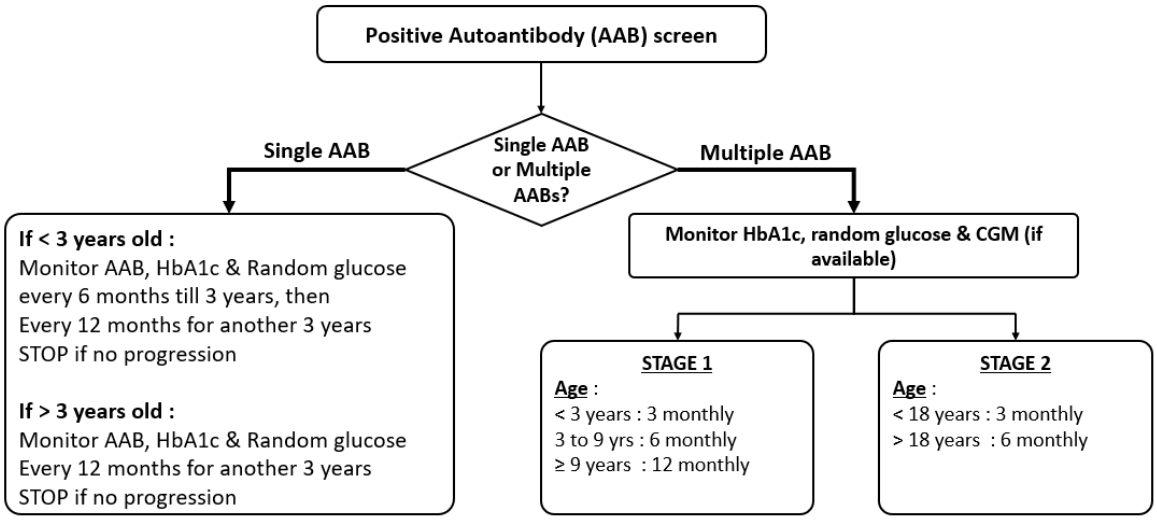
In adults and high-BMI populations, single low-titer GAD positivity is common and often not sufficient to classify a patient as T1D without supportive clinical and metabolic features.

Risk stratification and progression prediction

AAB status is central to the modern three-stage classification of T1D, which identifies individuals before they become symptomatic. In Stage 1 (asymptomatic autoimmunity; normoglycemia, ≥2 AABs), the risk of progression to overt diabetes is 44% within 5y and 70% within 10y. In Stage 2 (dysglycemia, ≥2 AABs), the progression risk rises to approximately 75% within 5y. By Stage 3 (symptomatic diabetes onset), residual pancreatic β-cells are reduced to 20-30% of normal[2]. The number of positive AABs is the strongest indicator for developing clinical diabetes, with two or more positive indicating an almost 100% long-term risk. Moreover, specific AAB patterns influence the speed of progression. AAB combinations like IA-2 and ZnT8 predict faster β-cell loss, while IAA/GAD-only profiles progress more slowly[3].

This temporal progression allows identification of individuals in preclinical phases when preventive interventions might halt disease progression. Major prospective studies like TEDDY and TrialNet have developed AAB-based algorithms for effective risk stratification, guiding clinical monitoring and treatment decisions.

The following framework for screening and monitoring in children with autoimmunity is based on ISPAD 2024 Clinical Practice Guidelines.



From prediction to prevention

A growing number of therapies have demonstrated the ability to slow β-cell loss, heralding a new era of T1D intervention.

Teplizumab, an anti-CD3 monoclonal antibody, is currently the sole FDA-approved therapy for delaying progression from Stage 2 to Stage 3 of T1D. In a pivotal clinical trial, administration of a single 14-day intravenous course resulted in a median delay to clinical diagnosis of approximately 2.7 years compared with placebo[4].

Interventions in Stage 3 T1D (New Onset): Numerous agents have demonstrated the capacity to preserve C-peptide (a marker of β-cell function) in newly diagnosed Stage 3 T1D, including cyclosporine, abatacept, rituximab, verapamil, and baricitinib. Based on promising results in the recently published PROTECT study data, Teplizumab has also shown efficacy in Stage 3, and could become the first agent approved for this indication. These studies provide crucial safety and efficacy data to support moving therapies into earlier stages of the disease[4].

As preventive therapies become increasingly available, population screening for autoantibodies will likely transition from research applications to routine clinical practice, fundamentally transforming T1D management through early identification and intervention.

References

1. Kawasaki E. Anti-islet autoantibodies in type 1 diabetes. International Journal of Molecular Sciences. 2023 Jun 11;24(12):10012.
2. Insel RA, Dunne JL, Atkinson MA, Chiang JL, Dabelea D, Gottlieb PA, Greenbaum CJ, Herold KC, Krischer JP, Lernmark Å, Ratner RE. Staging presymptomatic type 1 diabetes: a scientific statement of JDRF, the Endocrine Society, and the American Diabetes Association. Diabetes Care. 2015 Oct 1;38(10):1964-74.
3. Michels AW, Gottlieb PA, Nelson B, Dayan C. Autoimmune type 1 diabetes in the era of disease- modifying immune therapy. Diabetes/Metabolism Research and Reviews. 2025 Oct;41(7):e70091.
4. Haller MJ, Bell KJ, Besser RE, Casteels K, Couper JJ, Craig ME, Elding Larsson H, Jacobsen L, Lange K, Oron T, Sims EK. ISPAD clinical practice consensus guidelines 2024: screening, staging, and strategies to preserve beta-cell function in children and adolescents with type 1 diabetes. Hormone Research in Paediatrics. 2025 Mar 11;97(6):529-45.

Arpita Bhriguvanshi, Professor Junior Grade, King George Medical University, Lucknow

Ziegler A-G, Achenbach P, Weiss A, et al. Efficacy of once-daily, high-dose, oral insulin immunotherapy in children genetically at risk for T1D (POInT): a European, randomized, placebo-controlled, primary prevention trial. Lancet 2025

Large, multicenter, double-blind RCT embedded in a population-based genetic screening program across five European countries: of 241,977 newborns screened, 2,750 (1.14%) had >10% genetic risk for islet autoimmunity, and 1,050 infants (4–7 months) were randomized 1:1 to high-dose oral insulin (up-titrated to 67.5 mg/day and continued to age 3y) or placebo, with follow-up to age 6.5y. Primary outcome was development of ≥2 islet autoantibodies or overt diabetes; secondary outcomes included dysglycemia/diabetes and safety. In modified intention-to-treat, the primary outcome occurred in 52/526 (10%) insulin vs 46/522 (9%) placebo (HR 1.12; 95% CI 0.76–1.67; p=0.57), i.e. no overall prevention effect. However, prespecified analyses showed a significant interaction with the INS rs1004446 genotype: in carriers of susceptible INS genotypes, oral insulin reduced progression to dysglycemia/diabetes (HR ~0.38), whereas in non-susceptible genotypes, the primary outcome risk was higher (HR ~2.1). Hypoglycemia was rare and comparable (0.03% vs 0.08% of SMBG values <50 mg/dL), adverse events were balanced, and one death in the insulin group was adjudicated unrelated. **The study confirms the safety and feasibility of early-life oral insulin in thousands of infants but indicates that non–HLA genetic context critically modifies its immune-modulatory effect, arguing against unselected population use and in favor of future genotype-stratified prevention approaches.**

De Meulemeester J, Valgaerts L, Tenoutasse S, et al. One-year effectiveness and safety in young children aged 2–6 years with type 1 diabetes using an automated insulin delivery system: a real-world prospective cohort study. Diabetes Obes Metab. 2026;28(1):551–561. Prospective, multicenter, real-world cohort from Belgian pediatric diabetes centers evaluating MiniMed™ 780G automated insulin delivery (AID) in 149 preschool children: ages 2–6y (mean 4.2±1.4y; diabetes duration ~22 months). They transitioned from pump therapy in manual/SmartGuard mode to full AID and were followed for 12 months, with CGM and questionnaire data analyzed using paired comparisons. Baseline time-in-range (TIR 70-180 mg/dL) of 56.8% and time in tight range (TITR 70–140 mg/dL) of 36.3% improved to 66.6% and 47%, respectively (≈2–2.5 extra hours/day within target), while HbA1c decreased from 7.6% to 7.2%. Time <70 mg/dL was stable (~5%) and time <54 mg/dL slightly decreased, indicating improved glycemia without added hypoglycemia burden. The proportion of children achieving consensus pediatric targets (>70% TIR and HbA1c <7.0%) increased significantly. Parent-reported burden on the HAPPI-D scale and indices of diabetes distress showed modest but consistent improvement, and reported school/daycare and parental work absenteeism ~ halved compared with the preceding year. Safety was favorable: there were no episodes of severe hypoglycemia and only one episode of DKA attributable to infusion set failure over ~140 patient-years of follow-up. **This study supports AID as a safe, effective and family-friendly standard of care even in very young children and provides strong real-world justification for early AID access in preschool T1D where health systems permit**.

Shah A, Jamal A, Qadri M, et al. Early vs late initiation of long-acting basal insulin during intravenous insulin in pediatric DKA: a GRADE-assessed systematic review and meta-analysis. Eur J Pediatr. 2025;184:797. Systematic review and random-effects meta-analysis of early vs late subcutaneous basal insulin in children and adolescents with DKA, conducted according to PRISMA and GRADE. Included were 8 studies (3 RCTs, 5 observational cohorts) with 1,325 participants <18y; "early basal" was defined as long-acting insulin (glargine or detemir) administered during the intravenous insulin infusion with ≥4 hours overlap, while controls received basal at/after IV insulin discontinuation. Primary outcome was time to resolution of DKA/acidosis (standardized biochemical criteria); secondary outcomes included duration of IV insulin, hospital length of stay, & rates of hypoglycemia & hypokalemia. Pooled analysis showed that early basal significantly reduced time to DKA resolution by approximately 3.6h (mean difference −3.58h; 95% CI −6.13 to −1.03), with sensitivity analysis (excluding one heterogeneous cohort) suggesting an even greater effect (≈−4.8h). Effects on total IV insulin duration and hospital stay were inconsistent, with point estimates favoring early basal but confidence intervals crossing null in most analyses. Importantly, early basal did not increase hypoglycemia (OR 0.95; 95% CI 0.58–1.56) or hypokalemia (OR 1.19; 95% CI 0.67–2.11), and certainty of evidence was graded as high for the time-to-resolution outcome in RCTs. **The authors conclude that incorporating planned early basal insulin with adequate overlap into pediatric DKA protocols can safely accelerate metabolic stabilization and may smooth transition to subcutaneous regimens without increasing acute complications.**

Zimmermann S, Tierney BT, Nguyen VK, et al. Specification curve analysis of the TEDDY study reveals large

Becker M, Weiskorn J, Wiegand S, et al. Familial Hypercholesterolemia in Pediatric Patients with T1D: Double Challenge for Diagnosis and Treatment. Diabetes Care. 2025. Large registry-based cohort study using data from the DPV (Diabetes Prospective Follow-up) registry (2014–2023) to define the prevalence, phenotype, and treatment of familial hypercholesterolemia (FH) in 41,992 children and adolescents with T1D across 384 European centers. FH status was inferred from repeated LDL-C measurements: *probable FH* was defined as >2 LDL-C values >4.9 mmol/L, *possible FH* as >2 values 4.1–4.9 mmol/L, and *non-FH* as LDL-C persistently <4.1 mmol/L. Probable FH was present in 195 patients (0.56%; ≈1 in 215), and possible FH in 416 (1.2%), implying that ~ 1:70 pediatric T1D patients may have clinically significant hypercholesterolemia suggestive of FH. Compared with the non-FH group, both FH groups had higher BMI SDS (≈0.55–0.73 vs 0.27), higher HbA1c (8.2-8.3% vs 7.5%), and were more often female (57-62% vs 44%; all p<0.00001). Multivariable analyses showed that poor glycemic control (HbA1c >9%), intermediate control (7.5–9%), female sex, and BMI >70th percentile significantly increased the odds of LDL-C in the FH range. Despite markedly elevated lifetime atherosclerotic risk in these "double burden" patients, only 20% of possible FH and 29% of probable FH cases were receiving lipid-lowering therapy, and treatment often started late in adolescence. **The study highlights the need for proactive LDL-C screening, clinical FH recognition, optimization of glycemic control and BMI, and early statin initiation in pediatric T1D to prevent premature cardiovascular disease.**

LISTENING TO THE STALWARTS – DR PSN MENON

Nikhil Lohiya, *Dept of Growth & Endocrinology, Silver Lining Pediatric Super Specialty Center, Nagpur*

Being in the field of pediatric endocrinology, it seems like I am learning something new every day. And mind you, it is not always the subject; it could be about the practical aspects of this field - how it started and how it has progressed to the current scenario is something which has always interested me. This was in essence what I felt while talking to Dr PSN Menon sir. Doing a podcast with Dr PSN Menon sir was an absolute pleasure. It showed me how he evolved from his childhood to the towering personality at AIIMS Delhi, a top tier institution in India. Interacting with him I realized what he has done for the field of Pediatric Endocrinology cannot be described in a single podcast. Many of us young people can draw inspiration from him, and learn to work as a team, like him. His pearls of wisdom were really an eye opener - I had a wonderful time talking to him, finding him gradually opening up. It was smoothly done in a single take, no editing was needed.

We hope that you will love this venture of CAPE News – "Podcast with Stalwarts". The links below are for both the audio and the video recording. Do listen as per your choice: we would highly recommend it!

Video- https://youtu.be/89-k7gn07cc?si=sWE-TTRRqpAIPrQp

Audio- https://drive.google.com/file/d/1UnRroaYqd8qCxou5DPRsfN-CFIBNLWX_/view?usp=sharing

CASE REPORT- CONGENITAL RENAL CYSTS AND EARLY DYSGLYCEMIA: A CASE OF MODY-5 (HNF- 1B MUTATION)

Keerthana & Vani HN, *IG Institute of Child Health, Bengaluru*

Case presentation: A 6.5-year-old boy, the second offspring of non-consanguineous parents, was referred for evaluation of short stature. Antenatal ultrasonography had demonstrated bilateral renal cystic dysplasia. Postnatal laboratory evaluation revealed elevated serum creatinine (1.8 mg/dL), and ultrasonography showed bilateral multicystic kidneys, prompting longitudinal nephrology surveillance. Developmental history was remarkable for delayed expressive language and behavioral concerns, culminating in a diagnosis of mild autism spectrum disorder; early behavioral and speech interventions led to incremental developmental progress.

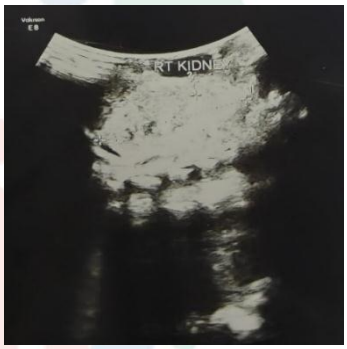
A compelling paternal history of diabetes was elicited: the paternal grandfather had type 2 diabetes (T2), and three paternal aunts and one uncle had been diagnosed with early-onset diabetes, suggesting an autosomal-dominant inheritance pattern. At presentation, the child's height was <3rd centile for age and his BMI was 14.2 kg/m2 (25-50th centile). Detailed physical examination and systemic evaluation were otherwise unremarkable, with no dysmorphic features.

Lab assessment revealed impaired glucose tolerance, with an HbA1c of 6.4% and fasting plasma glucose of 125 mg/dL; elevated parathyroid hormone, with normal serum uric acid and magnesium (Table). Ultrasound evaluation revealed both kidneys were small with markedly increased cortical echogenicity, indistinct corticomedullary differentiation and multiple cortical microcysts, the largest measuring 6 × 4.5 mm in the right renal mid-pole and 5 × 4.5 mm in the left lower pole (Fig).

Given the constellation of congenital renal abnormalities, subtle but evolving glycemic dysregulation and a strong paternal history, a monogenic etiology was suspected. Whole-exome sequencing identified a heterozygous missense variant in exon 2 of the **HNF1B** gene (chr17:g.37739541G>A), providing a definitive molecular diagnosis and correlating strongly with his renal, biochemical and neurodevelopmental phenotype.

Parameters	Value
HbA1c	6.4%
Fasting blood glucose	125 mg/dl
Urea	44.4 mg/dl
Creatinine	1.28 mg/dl
Calcium	10.2 mg/dl
Phosphate	4.9 mg/dl
PTH	79.71 pg/ml
25-OH Vitamin D	22.93 ng/ml
ALP	441.8 U/L
AST/ALT	48.6/ 43.1 U/L
Magnesium	2.15 mg/dl
Uric acid	3.6 mg/dl
eGFR	35 mL/min/1.73m2

Table: Investigations



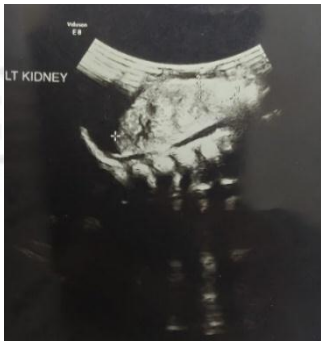


Fig: Postnatal ultrasound showing increased echogenicity of bilateral kidneys, suggestive of renal cysts

Discussion: MODY-5, also referred to as renal cysts and diabetes (RCAD) syndrome, is a monogenic disorder caused by pathogenic variants in the HNF1B gene and characterised by the coexistence of structural renal disease and disturbances in glucose homeostasis.[1] In most affected children, renal involvement is the earliest and most conspicuous clinical feature; antenatal detection of echogenic or cystic kidneys, as in this child, is a common mode of initial recognition.[2] The renal phenotype encompasses bilateral cystic dysplasia, hyperechogenic kidneys, poor corticomedullary differentiation and progressive loss of function, frequently accompanied by tubulopathy, hypomagnesaemia and hyperuricaemia.[1] These renal and biochemical abnormalities should alert clinicians to the possibility of an underlying HNF1B defect long before overt diabetes develops.

The metabolic component of MODY-5 is typically non-autoimmune and non-ketotic, with a wide range of presentations, from impaired fasting glucose in childhood to overt diabetes in adolescence or early adult life.[3] Rather than classical insulin resistance, the primary mechanism is impaired pancreatic development and β-cell dysfunction, which distinguishes this entity from T2D, and explains the often suboptimal response to sulfonylureas.[3] Many patients eventually require insulin therapy, although some may initially be managed with dietary measures or oral agents, particularly when hyperglycemia is mild and renal function is preserved.[3]

The phenotypic spectrum associated with HNF1B variants is broad, with reports of neurodevelopmental abnormalities, hepatobiliary disease, pancreatic hypoplasia, secondary hyperparathyroidism and genitourinary malformations.[2] This pleiotropy, together with marked intrafamilial variability, contributes to diagnostic delay. Early molecular confirmation in a child with congenital renal cysts, evolving dysglycemia, and a compatible family history, as in the present case, provides a unifying explanation for multisystem findings, allows targeted surveillance and informs counselling of at-risk relatives.[3]

The findings in this child demonstrate how HNF1B mutations can unify seemingly unrelated renal, metabolic and developmental features. Early identification allows proactive management and may prevent delayed diagnosis of chronic kidney disease or overt diabetes in affected individuals and their families.

Conclusion: This case underscores the pleiotropic nature of *HNF1B* mutations, linking congenital renal anomalies, neurodevelopmental delay, and early glucose intolerance. It highlights the critical importance of genetic testing in children with renal cysts and a family history of diabetes to prevent diagnostic delays and guide long-term multisystem management.

References

1. Bockenhauer D, Jaureguiberry G. HNF1B-associated clinical phenotypes: the kidney and beyond. Pediatr Nephrol. 2016;31(5):707-714.
2. Ge S, Yang M, Cui Y, et al. The Clinical Characteristics and Gene Mutations of Maturity-Onset Diabetes of the Young Type 5 in Sixty-One Patients. Front Endocrinol. 2022;13:911526.
3. Hua Tan CS, Ang SF, Yeoh E, et al. MODY5 Hepatocyte Nuclear Factor 1ß (HNF1ß)-Associated Nephropathy: experience from a regional monogenic diabetes referral centre in Singapore. J Investig Med High Impact Case Rep. 2022;10:23247096211065626.

CASE REPORT A CONFLUENCE OF SYNDROMES IN A CHILD WITH DIABETES MELLITUS

Joewin Monteiro & Ruchi Parikh, *Narayana Health - SRCC Children's Hospital, Haji Ali, Mumbai*

A 4y 3mo old girl, first born to a non-consanguineously married couple, planned for cochlear implantation, was referred to us for management of diabetes mellitus. Parents noted at 10 months of age that she had hearing impairment. At age 2y8mo, she developed osmotic symptoms, was diagnosed to have diabetes, and initiated on subcutaneous insulin therapy by a team of adult endocrinologists. They noted persistent anemia and treated it with iron therapy. The overall compliance to therapy was poor, with infrequent follow ups, and admission for diabetic ketosis 6 mo after diagnosis. At age 4y, she was evaluated by an ENT specialist for hearing loss and advised cochlear implant for bilateral sensorineural hearing loss (SNHL). It was during the pre-surgical evaluation that she was found to have short stature, and dysmorphic features - ptosis, esotropia, >10 cafe au lait spots, along with persistent hypertension and dimorphic anemia, though serum iron, vitamin B12 and folic acid levels were normal. Significant family history consistent with features of neurofibromatosis (NF) was elicited. Whole exome sequencing was obtained and revealed pathogenic variants in both NF1 and SLC19A2—confirming the rare coexistence of NF Type 1 (NF1) and Thiamine-Responsive Megaloblastic Anemia (TRMA) with Diabetes. The child was initiated on oral thiamine and anti-hypertensives, and continued on basal bolus subcutaneous insulin regimen, with regular follow up. The hemoglobin improved from 7.7 g/dl to 11 g/dl in 6 weeks post-initiation of thiamine. The glycemic control also improved significantly. The child underwent successful cochlear implant with intense peri-operative glycemic monitoring.

Discussion

It is important to do a complete physical examination of any child with diabetes, as the presence of any dysmorphic features or other medical issues should be red flags for looking beyond the diagnosis of type 1 diabetes (T1D). The presence of hearing impairment and persistent anemia not responding to conventional iron and vitamin replacement alerted us to the need to do a thorough evaluation for other associations, which would also alter the definitive line of management. Other frequently overlooked aspects of care in children are measuring blood pressure, which should be done in every child at presentation and at least annually; and monitoring growth, again at presentation and at least annually.

This child had TRMA, which is characterized by megaloblastic anemia, progressive SNHL, and insulin dependent diabetes, and responds to oral thiamine. Identification by molecular genetic testing of biallelic pathogenic variants in SLC19A2 was confirmatory. Prevalence of TRMA is estimated to be <1/1,000,000 with autosomal recessive inheritance.

NF1 is a multisystem disorder, with arterial hypertension occurring in at least 15-20% of individuals. Prevalence is reported to be 1/3,000 live births, with autosomal dominant inheritance.

In our case, the child had SNHL, insulin dependent diabetes, dysmorphism including multiple cafe au lait spots, persistent anemia despite iron therapy, undetected hypertension, and significant family history of NF. These features raised a strong suspicion of a genetic etiology, i.e. NF with diabetes. However, persistent anemia with SNHL raised the concern of an alternative etiology, hence the whole exome analysis was ordered. This yielded pathogenic variants of two unrelated disorders (NF1 and TRMA) which co-related with the child's condition. This highlights the need for comprehensive genetic evaluation in atypical pediatric presentations to improve outcomes and quality of life.

Acknowledgement: The authors gratefully acknowledge Pediatric ENT: Dr Shruti Bansal, Pediatric Hematologist: Dr Kriti Hegde, Pediatric Cardiologist: Dr Supratim Sen, and the teams of Pediatric Intensive Care and Anaesthesia for their support during the care of this patient.

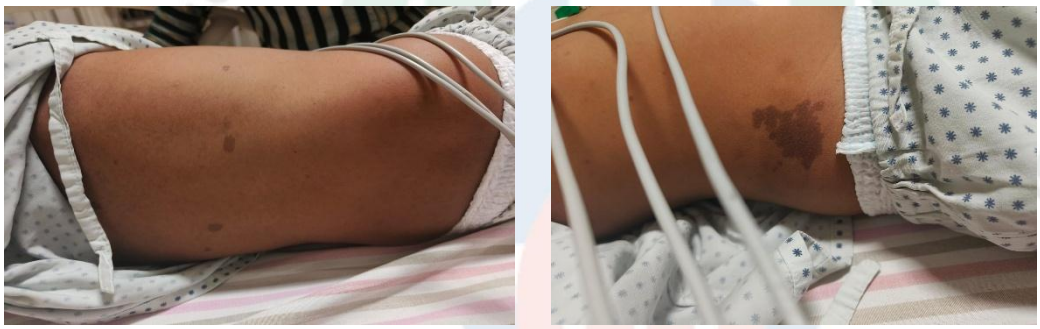


Fig 1a & 1b: Multiple irregular cafe au lait spots

References

1. Zaki A, et al. Neurofibromatosis and Type 1 Diabetes in a Seven-Year-Old Child: A Rare Combination. Curr Pediatr Res. 2018:172-176.
2. Patel SK, et al. Autoantibody-Negative Type 1 Diabetes: A Neglected Subtype. Trends Endocrinol Metab. 2021;32(5):295-305.
3. Sako S, Tsunogai T, Oishi K. Thiamine-Responsive Megaloblastic Anemia Syndrome. 2003 Oct 24 [Updated 2022 Jul 28]. In: Adam MP, Feldman J, Mirzaa GM, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2024. Available from: https://www.ncbi.nlm.nih.gov/books/NBK1282//

IDEAL: ENABLING MYRIAD ACTIVITIES!

__Anju Virmani,__ Director, Pediatric Endocrinology, Max Smart Super Speciality Hospital & Rainbow Children's Hospital, Delhi; __Sirisha Boddu,__ Consultant Pediatric Endocrinologist, Rainbow Children's Hospital, Hyderabad; __Sheryl Salis,__ Director, Nurture Health Solutions, Mumbai



The 10th batch of **IDEAL** completed its exam in October, with 20 *IDEALites* certified and joining the *IDEALites* WhatsApp group. forum, which has become a vibrant platform for ongoing dialogue, peer support, and collaboration. To date, 145 non-physicians (88% women) and 82 physicians (79% women) have graduated from IDEAL. The process of starting batch 11 is underway: the call for applications received 52 applications. Selections are under way and the course scheduled to start with Orientation on 16th January 2026; the exam will be held in April.

The **Initiative for Diabetes Education and Awareness in Schools (IDEAS)** started in October 2022 by IDEAL faculty for increasing awareness of school staff for diabetes self-care, has videos in English, Hindi, Hinglish, Gujarati, Kannada, Tamil and Telegu for parents to share with their child's school staff at diagnosis and the start of every academic year. These videos discuss routine and emergency care in school, and are available on the ISPAE website and the IDEAS YouTube channel.

The **Monthly Myth-busting Messages (MMM)** started in July 2025 by IDEAL faculty with the aim of addressing widespread misconceptions around T1D have so far covered harms of very low-carbohydrate diets (July); drawbacks of premixed insulin regimens (August); and harms of insufficient SMBG (Sept). Ms Savita Agarwal is also kindly translating them into Hindi, to widen the reach.

- October MMM: discussed the myth that festive foods are forbidden, stating that like other children, those with T1D can enjoy festive foods, with adequate insulin, while cautioning against excessive consumption.
- November MMM: bust the idea that T1D being incurable, ruins the child's future, reassuring that with diabetes education, MDI, daily SMBG, care with MNT and exercise, persons with T1D can lead fulfilling lives.
- December MMM: tackled the idea that managing diabetes in children is just giving 2-3 fixed doses of insulin, emphasizing that managing T1D is complex and demanding for the child and entire family.

IDEAL's **social media presence** since September, helps share news, provide updates, and disseminate knowledge to the general public.
The links are
Facebook:(4) Facebook
Instagram:IDEAL (ISPAE Diabetes Education And Learning) (@ideal_diabeteseducation) • Instagram photos and videos
Twitter: https://x.com/ideal_diabetese.

Ongoing Pediatric Diabetes Education (OPDE) series: The OPDE program started in 2024, was revived in August 2025.

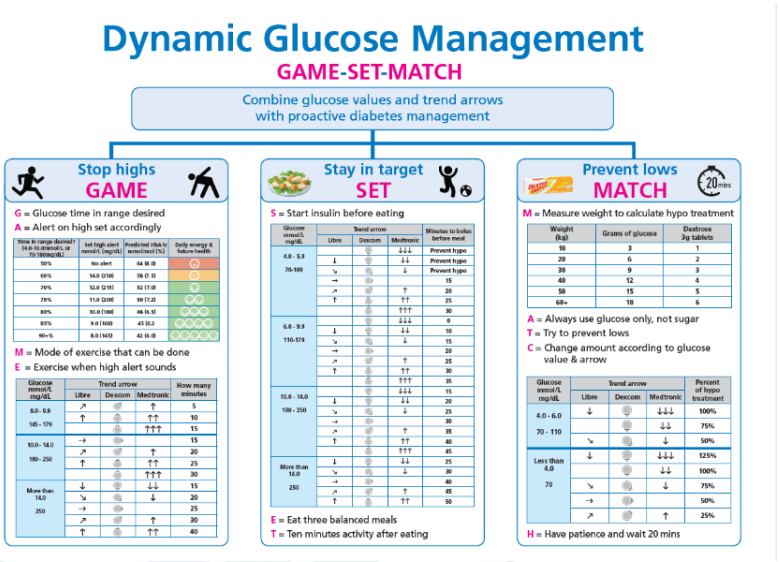
On 14th **August**, 8-9 pm, IDEAL faculty member Dr Shuchy Chugh spoke on "20 Years of Type 1 Diabetes Advocacy – The Do's and Don'ts". The key points of the session were:

1. Continuous learning and self-awareness are essential for the growth of diabetes educators.
2. Along with scientific knowledge, developing counselling skills and soft skills is crucial for effective diabetes education.
3. Regular supervision enhances ethical practice.
4. Reflective practice supports skill development.
5. Self-care helps prevent burnout and promotes well-being among advocates and educators.
6. Techniques such as journaling, mindfulness, and peer support can aid in diabetes management.
7. The Goals of diabetes education include (a) Empowering self and clients, (b) Facilitating change, and (c) Providing emotional support.

On 12th **October**, 8-9 pm, Dr Suma Uday & Mr John Pemberton discussed "**Dynamic Glucose Management - a new paradigm**".
Continuous Glucose Monitoring (CGM) is transforming T1D care by providing real-time insight into glucose patterns and time in range. In Birmingham, under the mentorship of Dr Uday, Mr Pemberton designed Dynamic Glucose Management (DGM), a novel education program. DGM equips children and adolescents, and their families with the practical skills to use CGM data dynamically: employing short bursts of moderate activity to reduce hyperglycemia, adjusting insulin dosing and timing based on CGM trend arrows, and preventing

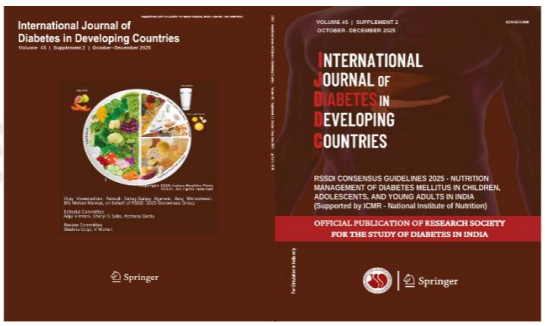
hypoglycemia more effectively. This innovative approach has been recognized internationally, presented at ISPAD, EASD, and ATTD, published in peer-reviewed journals, and incorporated into international exercise management guidelines. Some pearls:

1. In order to correct or prevent hypoglycemia, the insulin dose taken before exercise would depend on whether the trend arrow is flat, one or both arrows headed down.
2. To correct hypoglycemia, oral glucose works best. Sucrose is slower as it has only half glucose; fructose (e.g. fruits) is even slower.
3. If fruit is consumed to prevent hypoglycemia, glucose may be needed later. When both add up, this can cause a blood glucose (BG) spike.
4. Asking for the 15 minutes gap after giving glucose is often impractical, and not adhered to.
5. Pump users, especially those using closed loop pumps, may not need a snack after correcting hypoglycemia.
6. Avoid frequent cross-checking of sensor glucose (SG), especially if calibration is not possible, as does not help, and can create doubts.
7. Make sure the finger prick itself is a good check. Excessive squeezing can mean mostly plasma is extruded, giving an inaccurate BG, which can cause more confusion.
8. If readings are very discrepant, it may be better to repeat the finger prick.
9. Exercise for 10' after eating food really helps BG control as it diverts insulin from kidneys to muscles.



RSSDI Consensus Guidelines 2025 – Nutrition Management of Diabetes Mellitus in Children, Adolescents, and Young Adults in India

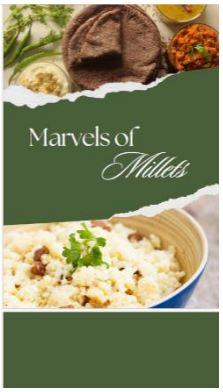
Managing diabetes is not easy, but managing in young persons, across infancy, childhood and adolescence, makes is more challenging. Advising about good nutrition, one of the pillars for managing diabetes, is not easy, but advising across the diverse patterns in India makes it more challenging. This is compounded by increasing consumption of inexpensive but unhealthy processed and ultra-processed foods (UPF). Dieticians equipped to handle these challenges are few, so physicians or diabetes educators need to be familiar with basic principles.



The **RSSDI Consensus Nutrition Guidelines 2025,** supported by ICMR-National Institute of Nutrition, and Breakthrough T1D, aim to provide to healthcare personnel key information about the intricacies of nutritional management in in children, adolescents, and young adults in the Indian context in a simple, practical format. The editors are IDEAL Program Directors Anju Virmani & Sheryl Salis, and Dr Archana Sarda, and authored by several ISPAE members and IDEALites. Published in the International Journal of Diabetes in Developing Countries (IJDDC), the Guidelines were officially released at the annual RSSDI National Conference held in Kochi in November 2025. They are freely available on the IJDDC and ISPAD website.

IJDDC website: IJDDC | RSSDI CONSENSUS GUIDELINES 2025 - NUTRITION MANAGEMENT OF DIABETES MELLITUS IN CHILDREN, ADOLESCENTS, AND YOUNG ADULTS IN INDIA (Supported by ICMR - National Institute of Nutrition)
ISPAD website: Nutrition

Marvels of Millets:

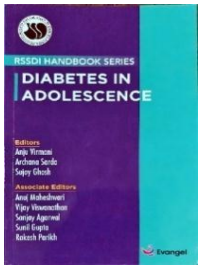


"Millets for Life: A Friendly Guide to Smart Eating"

Millets, ancient grains native to India, are known as "Shree Anna" for their multiple benefits. They are also called "Nutricereals" as they are high on nutrition (fiber, protein, essential vitamins and minerals). They are also high on sustainability: thriving in tough and arid soils, maturing in under 2 months. No wonder these eco-friendly and affordable grains were staples in large parts of the country. Once dismissed as "poor man's food", their numerous advantages have drawn renewed national and global interest, with India encouraging the United Nations, in collaboration with the FAO, to declare 2023 as the International Year of Millets during its 75th General Assembly.

IDEAL Program Director Ms Sheryl Salis and IDEALite Ms Riddhi Modi prepared a lovely little booklet for release on World Diabetes Day 2025. The recipes, contributed by IDEALites - experienced dietitians and doctors - are carefully curated and accurate, apart from being healthy and tasty, proving that delicious food does not have to mean junk food. The booklet is now available on the ISPAE website and will soon also be available on the LFAC website. Please use the recipes yourself and share in other groups and social media, with the request to friends to similarly forward further.
Link: Marvels of Millets - Indian Society for Pediatric and Adolescent Endocrinology (ISPAE)

RSSDI Handbook on Diabetes in Adolescence



Managing diabetes is not easy, but managing in during adolescence is very challenging. Diabetes Care Teams experienced in handling these challenges are few, so general physicians or internists need to be familiar with basic principles. The **RSSDI Handbook on Diabetes in Adolescence** aims to provide healthcare personnel practical guidance, simplifying the intricacies. The Handbook is being distributed by Sun Pharma. Soft copies are likely to be available after a few months.

AWARDS/ PUBLICATIONS by ISPAE MEMBERS

UNIVERSAL DECENTRALIZED CORD BLOOD TSH SCREENING SHOULD BE OFFERED AS ROUTINE DELIVERY CARE IN LIMITED-RESOURCE SETTINGS

Anju Virmani, *Director, Pediatric Endocrinology, Max Smart Super Speciality Hospital & Madhukar Rainbow Children's Hospital, New Delhi;* ***Sirisha Kusuma Boddu,*** *Pediatric Endocrinology, Rainbow Children's Hospital, Hyderabad.*

For half a century, the critical importance of universal newborn screening (NBS) for congenital hypothyroidism (CH) has been recognized, as irreversible brain damage can be prevented only if diagnosis is made and replacement started within a few days after birth. Doctors omitting to do a simple test at birth can condemn a family to cope with the burden of an intellectually disabled individual for 60-70 years. Yet worldwide the screening rate has stagnated at under 30% for the last more than 10 years.[1] The situation in India is particularly indefensible: with the highest birth rate worldwide of 25 million births annually (a fifth of global child births), but a screening rate of just 3%. Our incidence of CH of approximately 1:1000 births means that every year 25,000 families are being inflicted this burden, a huge drain on our country as well.

ISPAE has consistently advocated for universal NBS for CH. The ISPAE Guidelines (2018) advise universal screening, whether with CB or DBS. In early 2021, Dr Sirisha Kusuma Boddu, under the guidance of the then ISPAE President, Dr Shaila Bhattacharyya, formally approached the Ministry of Health and Family Welfare (MoHFW), Government of India, appealing for the provision of universal NBS for CH. The ISPAE leadership also approached professional bodies with large memberships - Central Indian Academy of Pediatrics (CIAP), the Federation of Obstetric and Gynaecological Societies of India (FOGSI), and the National Neonatology Forum (NNF), appealing for wide advocacy among their members on the critical importance of NBS for CH. MoHFW responded that CH is included under the Rashtriya Bal Swasthya Karyakram (RBSK), the Child Health component of the National Health Mission (NHM), subject to the availability of state-level facilities for sample collection, centralized identification systems, laboratory analysis, and follow-up management of identified newborns. The responsibility for implementation was thus effectively placed entirely on individual state governments, implying that advocacy and execution must navigate multiple layers of state-level bureaucracy, making implementation

variable across states and uniform nationwide implementation challenging. The result has been limited screening in Kerala since 2013, Chandigarh since 2017, and partial screening in Delhi since 2020. In Goa screening was started in 2008, stopped in 2013, and restarted in 2018.

In 2021, ISPAE received financial support from Global Pediatric Endocrinology and Diabetes (GPED) for developing educational public awareness videos on CH, for which Dr Sirisha and Dr Dhivyalakshmi J volunteered. The videos they created - in Hindi, Telugu, and Tamil, with English subtitles - were uploaded to the ISPAE YouTube channel to enable wider dissemination. Links:

https://youtu.be/sBrqw9DCSs8?si=ZaKvsW83G0SHBl31, https://youtu.be/nAMfZE0r_w8?si=7lbcPhWBIM7Nwwv0

Yet there is a simple way to remedy this situation. In our paper "Universal Decentralized Cord Blood TSH Screening Should Be Offered as Routine Delivery Care in Limited-Resource Settings" published in November 2025 in the International Journal of Neonatal Screening,[2] we point out that the persistently low screening rates in low-and-middle-income countries like India are because current day NBS programs, which use filter paper dried-blood spot (DBS) taken at 24-72 h of life for screening, are logistically complex and expensive, requiring specialized laboratories and excellent infrastructure. A viable and practical alternative to achieve universal screening is implementing decentralized testing of cord blood TSH (CB-TSH). TSH testing with a turn-around-time of 2-24 hours is widely, cheaply and reliably available across the country. This grass-roots-up rather than top-down strategy relies on awareness and willingness of individual health care personnel attending deliveries, rather than political will and bureaucracy. It bypasses many logistical hurdles, making it possible to simply, cheaply, efficiently, and painlessly screen almost 100% newborns, and identify and quickly start treatment of the baby with CH. Not just in Finland and Singapore, it is already being successfully done for over 30 years in several private centers in India. It only needs greater awareness.

The International Pediatric Association and IPA President Prof Joseph Haddad support this approach of testing CB TSH as a routine part of every delivery. IPA now encourages pediatricians across the world to begin implementing this CB TSH strategy in their centers to the maximum extent possible.[3]

The Indian Academy of Pediatrics has also endorsed this strategy in December 2025, with a comprehensive guideline titled “Universal Cord Blood TSH Screening: Every Newborn’s Right, Every Nation’s Responsibility — Switching Gears from Complexity to Practical Action”[4] supported by a team of distinguished experts from CIAP, the IAP Neonatology Chapter and the IAP Pediatric & Adolescent Endocrinology Chapter.[5] IAP and Secretary General Dr Yogesh N Parikh urge all members to incorporate these recommendations into their clinical practice and to refer to this guideline when caring for newborns or promoting universal cord blood TSH screening in their institutions and communities, since their awareness and engagement are crucial to achieving universal coverage and safeguarding the developmental potential of every newborn in India.

The IAP Executive Board, in its meeting in December 2025, also decided to send a formal request to the Central Government for nationwide implementation of universal NBS for CH. FOGSI has invited a talk on CB TSH screening in its annual meeting in January 2026, and agreed to advocate for universal screening among its members. GPED has indicated its willingness to carry the message to its members via its newsletter and social media outreach. In November 2025, a minute-long video has also been prepared by a family for increasing awareness among the general public. All three videos have been circulated in the Ped Endo India WhatsApp group with a request to all to circulate it as widely as possible.

In view of all these positive developments, we appeal to each of you to ensure that every birthing center where you have any influence starts universal CB TSH screening, and also actively spread the message to health professionals and all friends and relatives. We owe it to our children and to our great nation. (https://drive.google.com/file/d/1hrp-k6KyioMLBafZJIdeixQ_CvfQ0Z9z/view?usp=sharing)

References

1. Arrigoni M, Zwaveling-Soonawala N, LaFranchi SH, van Trotsenburg ASP, Mooij CF. Newborn screening for congenital hypothyroidism: Worldwide coverage 50 years after its start. *Eur. Thyroid J.* 2025, *14*, e240327.
2. Zwaveling-Soonawala N, Virmani A, Pulungan AB, Haddad J, Boddu SK, Darendeliler F, van Trotsenburg ASP. Universal Decentralized Cord Blood TSH Screening Should Be Offered as Routine Delivery Care in Limited-Resource Settings. *International Journal of Neonatal Screening*. 2025; 11(4):105. https://doi.org/10.3390/ijns11040105
3. IPA Webinar: Universal Decentralized Cord Blood TSH Testing: Increasing Screening Rates for Congenital Hypothyroidism with Minimal Logistic Issues. https://youtube.com/live/UhNDLmxwCMA?feature=share
4. Universal Cord Blood TSH Screening: Every Newborn’s Right, Every Nation’s Responsibility — Switching Gears from Complexity to Practical Action (https://iapindia.org/pdf/Universal-decentralized-Cord-Blood-TSH-Screening.pdf)
5. Anju Virmani[1], Yogesh N Parikh[2], Suman Rao P[3], Rajesh Kumar[4], Sirisha Kusuma Boddu[1], Aparna C[5], Abiramalatha T[5], Gopal Agrawal[5], Anurag Bajpai[6], Ravindra Kumar[7], Vasant M Khalatkar[8]. [1]Pediatric Endocrinologist; [2]Secretary General 2024-2025, Indian Academy of Pediatrics; [3]Secretary, IAP Neonatology Chapter; [4]Chairperson, IAP Neonatology Chapter; [5]Neonatologist; [6]Chairperson, IAP Pediatric & Adolescent Endocrinology Chapter; [7]Secretary, IAP Pediatric & Adolescent Endocrinology Chapter; President IAP 2025.
6. Desai MP, Sharma R, Riaz I, Sudhanshu S, Parikh R, Bhatia V. Newborn Screening Guidelines for Congenital Hypothyroidism in India: Recommendations of the Indian Society for Pediatric and Adolescent Endocrinology (ISPAE) – Part I: Screening and Confirmation of Diagnosis. Indian J Pediatr. 2018 Jun;85(6):440-447. doi: *10.1007/s12098-017-2575-y*.

ACTIVITIES BY ISPAE MEMBERS

Navigating Complexities in Pediatric Diabetes: Webinar for Pediatricians

Mounica Reddy M, *Consultant Pediatric Endocrinologist, Ankura Hospitals for Women and Children, Hyderabad*

A webinar titled "Navigating Complexities in Pediatric Diabetes", conducted by Ankura Hospitals, Hyderabad, had Dr Kavitha Sakamuri, Dr Rahul Reddy, and Dr Mounica Reddy addressing key challenges in pediatric diabetes care. The session covered difficult DKA scenarios, insulin transition and titration strategies, and holistic care for children living with Type 1 diabetes (T1D). The objective was to enhance clinical decision-making and standardize care practices, by empowering pediatricians with practical, evidence-based strategies in DKA management, insulin optimization, and lifelong T1D care, to significantly improve outcomes for children living with T1D and families.

Uniting for Strength: Families of Children living with T1D meet at Ankura Hospitals, Hyderabad

Mounica Reddy M, *Consultant Pediatric Endocrinologist, Ankura Hospitals for Women and Children, Hyderabad*

The Pediatric Endocrinology team at Ankura Hospitals, Hyderabad: Dr Kavitha Sakamuri, Dr Rahul Reddy, and Dr Mounica Reddy, along with diabetes educators and nursing staff, organized a special event on World Diabetes Day 2025 for children living with Type 1 Diabetes (T1D) and their families. Nearly 40 children and caregivers gathered for an afternoon of learning, support, and practical skill development. The event aimed to empower families with knowledge and confidence to manage T1D daily. It included interactive sessions on insulin administration, a dedicated corner for insulin pumps and diabetes technology, and small group counselling for parents on routine care and problem-solving. Children participated in fun activities to understand hypoglycemia, healthy habits, and safe physical play. T1D meets strengthen self-management skills while building a supportive community for families of children living with T1D.

Celebrating "Diabetes and Well-being" at Aster MIMS, Kozhikode

Dhanya Soodhana, *Aster MIMS, Kozhikode*

We hosted a get-together for children with T1D and their families on October 25, 2025, highlighting this year's World Diabetes Day theme "Diabetes and Well-being." The day featured interactive sessions on hypoglycemia management, carbohydrate counting, sick day care, and newer diabetes technologies, led by our pediatric team: Dr Suresh, Dr Vimal, Dr Subin, Dr Sathish & Dr Dhanya; dietician, Ms Navya; and diabetes educator, Ms Subitha. Children expressed their creativity through drawing, music, dance, and games, while we reinforced correct insulin administration techniques and encouraged open sharing among families. It was a wonderful day of learning, connection, and joy—celebrating the strength and resilience of our T1D community at Aster MIMS. Grateful to our dedicated team, participating families, and our 35 amazing children for making this event so meaningful & inspiring! Alone we can do so little, and together we can do so much!

Endocrine Secrets For practitioners and Postgraduates

Veena Nair, *IRIS Hospital, Thiruvanathapuram & Dhanya Soodhana, Aster MIMS, Kozhikode*

A pre-conference workshop was organized by Dr Veena Nair at IRIS Hospital as a part of the Kerala State PEDICON conference held at Trivandrum. The scientific program included common endocrine issues in children and included newer topics such as steroid therapy in children. The program was attended by around 25 delegates. The faculty included Dr Vijayakumar, Dr Reeta, Dr Sheeja, Dr Veena Nair, Dr Parvathy L, Dr Deepa, Dr Rajesh TV, Dr Priya, Dr Sowmya, Dr Reshma and Dr Dhanya Soodhana. Continuous growth monitoring of children on routine out-patient visit. And an overview of the common endocrine issues encountered including management of congenital hypothyroidism.

Endocrine Algorithms for Practicing Pediatricians (EAPP)

Ruchi Shah, *Pediatric Endocrinologist, Ahmedabad*

Under the Presidential Action Plan, Academy of Pediatrics, Gujarat 2024-25, "Endocrine Algorithms for Practicing Pediatricians" was undertaken, with eight pediatric endocrinologists across Gujarat developing a module for common endocrine conditions. Programs organized in IAP branches of Gujarat over a period of two years have been widely attended and appreciated by pediatricians.

EAPP was also undertaken as a workshop for ADOLESCON 2025, held between 19-21st September, 2025, in Ahmedabad. It well attended by over 40 pediatricians.

Distribution of insulin and glucometer strips to needy children with T1D

Tushar Godbole, *Consultant Pediatric Endocrinologist, Harmony Health Specialty Clinic, Nashik*

Harmony Health Specialty Clinic Nashik, in association with Dakshata Foundation, conducted a distribution ceremony of diabetes supplies on 11th October 2025, just before the festival of Diwali. 150 needy families with T1D were provided with glucometers along with two months' worth of supplies of insulins and glucostrips. Dr Tushar Godbole addressed the audience about the need for good glycemic control for a better future. Mr Vikrant Mate stressed the social and psychological support needed by these families. Dr Yashpal Gogate expressed the need for dedicated helpline number for families with diabetes. This is the second program conducted by them. The first program in Nov 2024 was attended by Hon MP Mr Prakash Waje, who earlier this year made recommendations in the Lok Sabha for uninterrupted insulin supplies at government institutes and cutting down the GST on diabetes supplies.

World Diabetes Day Celebration

Ruchi Shah, *Pediatric Endocrinologist, Endokids Clinic, Ahmedabad.*

Drs Shalmi Mehta and Ruchi Shah at Endokids Clinic, Ahmedabad, organized their 9th World Diabetes Day celebration on 9th Nov 2025, well attended by over 100 children, adolescents and their families. Children actively participated in drawing and recipe competitions, explained to the parents about insulin and use of technology over tables, presented skits on life scenarios of a child with T1D, and played lots of games. The highlight of the program was the volunteers, all living with diabetes, taking the responsibility of managing the entire event. A beautiful sugar-free and gluten-free cake was cut at the end of the event, continuing a tradition that we follow each year.

Such programs contribute to a support system, which is necessary for any family dealing with children with chronic conditions.

World Diabetes Day Celebration at Kolar

Tejasvi Sheshadri, *Consultant Pediatric Endocrinologist, Rainbow Children's Hospitals, Bangalore*

WDD was celebrated in Kolar at the Outreach Diabetes Clinic of the RL Jalappa Hospital & Research Center. The day was filled with fun and laughter as children participated in drawing competitions and various cultural activities. Ten children with HbA1c < 7% were given medals for their dedication and good control. The highlight of the day was the wishes that were fulfilled by the *Make-A-Wish India team.*

The Diabetes Clinic was started in Kolar in the year 2022 with 5 children. Now we as a team are providing care for over 80 children from poor socio-economic background.

World Diabetes Day Celebration at KIER, Bengaluru

Shilpa C Parihar & Cynthiyal T, *Dietitian-Diabetes Educators &* ***Santhosh Olety,*** *Pediatric Endocrinologist*

Karnataka Institute of Endocrinology and Research (KIER) hosted a WDD event on 8th November 2025 for children living with T1D and their families, to promote awareness, empowerment and community support. The program aimed to enhance psychological wellbeing and quality of life through networking and knowledge-sharing. The event featured a diverse range of activities: face-painting, team-building games, an activity to assess family and school support, and a vibrant showcasing of talent, comprising singing, Bharatanatyam performance, karate, solving Rubik cube, and yoga. Participants also interacted with achievers from members of

"*Diabuddies of Karnataka*", a support group T1D community. Ms Rekha RA released her book "*The Flute and the Needle – a Journey through Devotion and Discipline*"; recounting four decades of living with T1D. An appreciation ceremony honored donors and sponsors. Over 110 children and their families took part, making it a memorable celebration of awareness, resilience and togetherness.

The event highlighted the importance of emotional and social support in diabetes. By combining fun, education and community interaction, the program reinforced that managing diabetes effectively requires not only medical care but also strong networks of understanding, encouragement and shared experience.

Support group meeting for families of children with type 1 diabetes

Meenakumari Mohan, *PSG Super Specialty Hospital, Coimbatore*

A support group meeting was conducted for children with T1D and their families at PSG Super Specialty Hospital, Coimbatore, on 28th September. The theme was Continuous Glucose Monitoring and its benefits in the management of T1D. The importance of Time In Range along with HbA1c was explained, and the need for it to be used more often, was emphasized. 36 families attended the meeting and were benefited.

World Diabetes Day event at Chennai

Swathi Padmanaban, *Consultant Pediatric Endocrinologist, Rainbow Children's Hospital, Chennai.*

WDD was observed on 14th December 2024 with a dedicated program for children living with T1D and their families, at Bloom Hotel, Guindy, Chennai. The event aimed to empower families through education, emotional support, and community engagement. Dr Ganesh highlighted the importance of holistic, family-centerd care in pediatric diabetes management. The Chief Guest, Mr Prashanth Mani, spoke on "The Power of Support Groups: life lessons and hope for parents," emphasizing the role of peer support, shared experiences, and community networks in improving confidence and long-term outcomes for families living with T1D. Mr Madhan Kumar P shared a parent's perspective on the practical use of continuous glucose monitoring (CGM) systems and digital diabetes applications, offering valuable real-world insights for caregivers. A parent-focused session on recent advances in T1D care by Dr Swathi Padmanaban, covering newer insulin options, diabetes technologies, and practical day-to-day management, was followed by an interactive discussion. A nutrition session conducted by Dr Padmanaban and Dietitian Ms Sadiqa addressed balanced meal planning, portion control, and school lunch strategies. This was complemented by a fitness session conducted by the physiotherapy team. Emotional well-being was addressed by Dr Srinivasan, Clinical Psychologist. Insulin administration technique was also discussed. The event ended with a group photograph and informal interactions, fostering a strong sense of community.

Yog Dhyan Foundation activities in the last quarter of 2025 – a Summary

Anil Vedwal, *Chief Functionary, YDF*

YDF continues its multiple impactful activities focused on health monitoring, awareness, and emotional wellbeing of children with T1D.

October: On World Heart Day (28th Sep), **HRIDAY** provided yoga and nutrition support for a special HbA1c and awareness camp highlighting the link between heart health and T1D, which benefitted over 200 children and families. The 5th Oct Sunday Camp engaged over 300 participants in HbA1c testing, diabetes education, yoga, birthday celebrations, and nutrition support from **The Bigger Picture**. The 12th Oct virtual session honored **Ms**

Karishma Saiyyad (T1D educator & advocate) as *Hero of the Month*, with **Ms Riddhi Modi** and **Dr Anil Vedwal** moderating a discussion on *"Beyond Insulin: Transforming T1D Care in Low-Resource Settings"* with a diverse panel of people living with T1D, parents, and advocates. A joyful **Diwali Camp** on 19th Oct had children expressing creativity through cultural and art activities, reinforcing confidence, happiness, and community bonding under the guidance of YDF trustees.

November: YDF conducted a month-long campaign across Delhi NCR for **World Diabetes Awareness Month**. This included a Free Diabetes Supplies Camp and Kids-Led Fundraiser on 2nd Nov in collaboration with Rotary Club of Delhi Southend Next, supporting over 100 families and raising funds for SMBG access. On 9th Nov, a series of 14 awareness drives across hospitals, schools, community locations, and outreach centers helped spread education and support to hundreds of families. A special camp on 30th celebrated one year of continuous nutrition support by **Ms Vani Gupta** (The Bigger Picture), with education session, yoga, birthday celebrations, free diabetes supplies, and community lunch. The November virtual session focused on *"YDF's World Diabetes Month Drive – Our Impact Across Delhi & the Power of Community Support"*, highlighting all 14 awareness drives, volunteer engagement, and community partnerships.

December: YDF represented its grassroots work and received national recognition for its impact at the 3rd National Conclave for T1D at **SPAD-TiEUP 2025** in Kanpur (5-7th Dec); Dr Anil Vedwal discussed *Barriers in Type 1 Diabetes*, and Ms Chhavi *Living Life Gluten-Free*. The December virtual session honored **Ms Mehak Dhingra** (T1D Educator) as *Hero of the Month* and *Speaker* on *"Basal–Bolus or Premix Insulin Regimen: Which Is Better for T1D?"*, with expert panelists **Dr Leena Priyambada** (Pediatric Endocrinologist) and **Dr Shruti Arora** (Ayurveda doctor & T1D Educator). The final camp of the year on Sunday the 28th, will combine Christmas and New Year celebrations with HbA1c tests.

Collectively, the quarter reflected YDF's sustained commitment to awareness, access to care, education, and psychosocial support for young people living with T1D and their families.

Diabetes Day Celebration at Chacha Nehru Bal Chikitsalaya

Dr Medha Mittal, *Associate Professor, CNBC.*

Diabetes Day was celebrated at Chacha Nehru Bal Chikitsalaya beginning with screening of movies on T1D management, sick day management and hypoglycemia by Dr Bhanu Bhakri and were thoroughly enjoyed and appreciated by all patients, parents and staff members. This was followed by a karate performance by a young girl with diabetes. Dietician Ms Dolly spoke on nutritional aspects of management. Dr Aaradhana, Professor Pediatrics at UCMS, Delhi was the invited faculty and she gave a comprehensive talk on management of T1 Diabetes. The program was attended by 60 patients and their parents and was marked by their active participation.

Pediatric Endocrinology Made Easy

Dr Medha Mittal, *Associate Professor, CNBC.*

Workshop 'Pediatric Endocrinology Made Easy' organised by Dr Medha Mittal, Associate Professor Pediatrics at Chacha Nehru Bal Chikitsalaya on September 7, 2025 from 9 am to 5 pm in association with IAP Delhi and Team PCNI. Director Dr Seema Kapoor inaugurated the workshop along with IAP office bearers, Dr Ajay Kumar Gupta and Dr G P Kaushal. The speakers included Dr Vandana Jain, Dr Preeti Singh, Dr Anjali Verma, Dr Ruchi Mishra, Dr Aaradhana and Dr Ravindra Kumar. Over forty delegates participated in the case-based workshop covering all aspects of Pediatric Endocrinology.

Insulin injection technique, site rotation, prevention of lipihypertrophy

Sabhpreet Kaur, *PGIMER Chandigarh*

It was public awareness program in Endocrine OPD of PGIMER Chandigarh, Basic education of Type 1, Hypoglycemia s/s prevention, Injection technique, site rotation, low carb snacks, foot care was presented. OPD patients were involved and approximately number was 60-90 persons. It was presented under ADITI (Association of Diabetes (young) in tricity). There are so many low carbohydrate snacking options for Type 1 diabetes.

BEST PROGRAM

BEST Program Update – Advancing Type 1 Diabetes Education

Preeti Singh, *Professor, Lady Hardinge Medical College & Kalawati Saran Hospital, New Delhi*

The Basic Education Series on Type 1 Diabetes (BEST), launched in 2022, has grown into a vibrant learning platform for families and professionals involved in T1D care. Over these three years, BEST continues to foster practical knowledge, confidence, and make it a meaningful and sustainable model for diabetes education in India.
Over 10 batches, the program has trained 345 participants, including young people with T1D, their parents, diabetes educators, and healthcare providers.
The 11th batch is currently underway, with an enthusiastic and diverse group, including participants from public health and research backgrounds.

IDEAL CORNER

Shruti Arora, *Ayurveda practitioner, IDEALite/ Certified Diabetes Educator*

T1D Support Group Meet | 9 October 2025— "Care for the Caregiver"

Empower T1D, in collaboration with WECARD and JDF-Maharashtra Chapter, hosted a T1D Support Group session titled "Care for the Caregiver: Mental Health in T1D Families" on 9 October 2025 at 8:30pm. The interactive discussion focused on the emotional and mental health challenges faced by families living with T1D. It featured expert insights from Mr Ratnesh Srivastava and Ms Vaishali Vakil, along with lived-experience perspectives shared by Ms Riddhi Modi, Community Lead, Empower T1D, highlighting the importance of caregiver well-being and community support.

Empower Virtual Symposium | 16 October 2025 - Breaking the News

As part of the ongoing Virtual Symposium series, *Empower T1D*, in collaboration with *TieUp*, conducted a virtual symposium on "Breaking the News: Managing the Denial of Diagnosis" on 16th October, 8.30 pm, addressing the emotional challenges at the time of T1D diagnosis. The session featured Dr Mayura Choudhari Kale and Dr Kashyap Modi, with moderation by Dr Indrashish Mukherjee, focusing on empathetic communication and psychological support for families.

Diwali Wish Granting Celebration 17 Oct 2025 | at KIER, Bengaluru

Embracing the theme "Make-A-Wish — Spreading the light of Diwali to children's hearts," Make-A-Wish Bangalore celebrated Diwali at the Karnataka Institute of Endocrinology and Research (KIER) by granting 24 heartfelt wishes to children, including laptops, study tables, cycles, mobile phones, RC cars, and more. The event was graced by Smt R Prabhavathi, Financial Advisor.

Children enjoyed a creative painting session led by Manasa Firefly, while Sharan and Sanjay helped them design Diwali greeting cards, which were then presented to the dignitaries. Vinita (TresVista) added festive cheer by gifting diyas to all the wish kids.

IDEAL Paper Presented at ISPAE 2025

Dr Preeti Singh**,** Professor of Pediatric Endocrinology and Program Director of IDEAL and BEST, presented our paper at the 9th Biennial ISPAE Conference, held in Nagpur from 14 to 16 November 2025**.** The presentation showcased our work on countering misinformation and strengthening T1D care through scalable, evidence-based initiatives. This abstract was also presented at the GPED 2025 virtual meeting.

Allan Drash 2025 Awardees – Dr. Preeti Singh & Dr. Jaivinder Yadav

Warm congratulations to IDEAL Program Director Dr Preeti Singh and IDEAL Faculty Dr Jaivinder Yadav, on being awarded the prestigious ISPAD Allan Drash Clinical Fellowship 2025 by Breakthrough T1D and ISPAD. The fellowship recognizes their excellence in clinical care, impactful research, and innovative education in pediatric diabetes and will support advanced training at an ISPAD Centre of Excellence, strengthening T1D care in India and other low- and middle-income countries.

Major Legal Victory for Students with Type 1 Diabetes

In a landmark judgment *(WP 32896/2025, order dated 07.11.2025)*, the Madhya Pradesh High Court ruled in favor of Pragyansh Tak, who was denied admission to a BPEd course solely due to T1D. The Court held that T1D cannot be a ground to deny education, calling the college's action arbitrary, discriminatory, and unconstitutional. Relying on AIIMS medical opinion, evidence of sports participation, and Supreme Court disability-rights jurisprudence, the High Court directed the college to grant immediate admission and provide reasonable accommodations, including insulin storage and snack access.

This judgment marks a significant step forward for the rights and inclusion of persons living with T1D.

T1D Community Support Initiative for Underprivileged Children

The IDEALite community came together to support underprivileged children living with T1D, enabling access to CGM technology through donated FreeStyle Libre Readers for those without compatible devices. This appeal for support was initiated by Ms Rekha Negi, Founder & President, Uttarakhand Diabetes Awareness Initiative (UDAI) Society, as part of her sustained efforts to improve access, safety, and independence for children from underserved backgrounds. The initiative was made possible through the generous contributions of individual donors and supporting organizations, whose collective efforts exemplified community-driven care and solidarity.

JDF DiaRun Challenge 2025 | November 1–14, 2025

The JDF DiaRun Challenge 2025 witnessed enthusiastic Pan-India participation, with over 150 registered participants, age group spanning from 7 to 70 years! DiaChamps, DiaWarriors, parents, siblings, and friends came together for two weeks of fitness, motivation, and community bonding. Participants collectively took on the challenge of completing 35 km over 14 days, tracking their daily walks or runs through fitness apps such as Strava, reinforcing the importance of structured physical activity. The initiative celebrated perseverance and inclusivity, with successful finishers receiving e-certificates of completion.

JDF 41st Annual Winter Camp | 12–14 Dec 2025 | Lonavala

The Juvenile Diabetes Foundation (JDF) conducted a 2.5-day Annual Winter Camp at Lonavala: the program was attended by about 200 participants, including individuals with T1D across age groups and their families. The camp featured focused diabetes education sessions on sick-day management, insulin pump education, and carbohydrate counting, followed by JFEST, an entertainment program that fostered bonding and celebration among participants.

Diabetes Day at Govt Medical College, Ernakulam

WDD was celebrated with sessions on self-management, carb counting, healthy eating, CGM use, and mental well-being, conducted by eminent faculty and diabetes educators. Dr Parvathy guided attendees on CGM interpretation, while Psychiatry faculty led screening for mental well-being. A healthy recipe book by Ms Gowri was released. Children and adolescents with T1D took their insulin doses together. Dr Geena, adult endocrinologist, led the session on complications and prevention, presenting real-life case scenarios and demonstrating how good glycemic control can prevent diabetes-related complications. A resident doctor also inspired the audience by sharing her 12-year journey living with T1D.

Demystifying Type 1 Diabetes | YouTube Podcast

On WDD, experts Dr Aspi Irani, Ms Sheryl Salis, and Ms Vaishali Vakil were featured on the YouTube podcast "Nisha's Niche" to bust common myths around T1D. Hosted by Nisha, mother of a child with T1D, the discussion offered practical insights, reassurance, and awareness for families and the wider community.
The episode, titled "Diabetes डरना मना है!", highlighted the importance of understanding, acceptance, and informed care in living well with T1D.

WDD Program at Kokilaben Dhirubhai Ambani Hospital | 29 Nov 2025

As part of WDD celebrations, IDEAL faculty Dr Akanksha Parikh and IDEALite Ms Vaishali Vakil participated in an awareness program at Kokilaben Dhirubhai Ambani Hospital on 29 Nov 2025, 2-4 pm. Ms Vakil shared her personal journey of living with T1D, highlighting lived experience and resilience. The program included a children's art competition on the theme *"Diabetes Management"*, judged by Ms Vakil, showcasing the creativity of young participants. An engaging skit guided by Dr Akanksha Parikh, interactive games, and healthy refreshments added to the experience. The event was attended by about 70–100 participants.

World Diabetes Month Celebration at Endodiab, Perinthalmanna | 30 Nov 2025

As part of WDD celebrations, Endodiab Center, Perinthalmanna organized a community awareness program on 30 Nov 2025. Over 80 people with T1D and their family members participated. The event began with a Walkathon at 7.30 am, followed by an awareness and education session at Hotel Green Table, Perinthalmanna. The educational sessions were led by Dr Anish Ahamed, Endocrinologist, Ms Sudha Sreejesh, Diabetes Educator, Endodiab, and IDEALite Sumod Subramanian.

T1D Xmas Special Meet: Bolus & Buddies Connect | 12 Dec 2025

Empower T1D hosted the T1D Xmas Special Meet – "Bolus & Buddies Connect" on 12 Dec 2025, bringing together the global T1D community for an engaging virtual connect. The meet featured Dr. Radhika Purushothaman, Ms Molly Barry, and Ms Deeksha Dev as facilitators, with moderation by Dr Manisha Gupta and Ms Riddhi Modi. The session focused on shared experiences, emotional well-being, and practical aspects of living with T1D. The festive interaction provided a supportive space for dialogue, peer bonding, and community learning, reinforcing the spirit of togetherness during the holiday season.

TRAINEES SECTION

Swathi Padmanaban, *Consultant Pediatric & Adolescent Endocrinologist, Rainbow Children's Hospital, Chennai, Tamil Nadu*

Please answer the questions below on Pediatric Diabetes. Correct answers and individual quiz scores will be mailed to the respective email address after the quiz closes.

https://docs.google.com/forms/d/e/1FAIpQLSeBhddIQOMxBAzJrx6e5rOWlz6f6YltyxAN7ylqoP4FmtqhoA/viewform?usp=sharing&ouid=114427015294263632690

Last Date 10th January 2025

ISPAE QUIZ 2025

Aashima Dabas, *Professor, Dept of Pediatrics, Maulana Azad Medical College & Lok Nayak Hospital, New Delhi*

The annual Pediatric Endocrine quiz was successfully conducted in December 2025 by Quiz team led by Dr Aayush Gupta, Dr Varuna Vyas, Dr Aashima Dabas, Dr Diksha Shirodkar and Dr Aaradhana Singh. The screening round had a total of nine teams that participated. Four teams progressed to the finals; namely, Drs Sharan Thangaraju and Neha KC (PGI Chandigarh, R Narayanan and Kanupriya Kundu (AIIMS Delhi), Urvee Swaika and Navya George (Manipal Hospital, Bangalore) and Keerthana K J and Ritesh B R (IGICH Bangalore). The Quizmaster for the finale was Dr Shaila Bhattacharya. The winners were team from AIIMS Delhi followed by PGI Chandigarh, who lost narrowly in a tie-breaker. ISPAE President and Secretary announced the awards to the winning teams at the end and conveyed heartiest wishes for the New Year!

ISPAE ISPAD BASICS & BEYOND

MIDTERM MEETING 2026

24|25 OCTOBER 2026 AHMEDABAD

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